

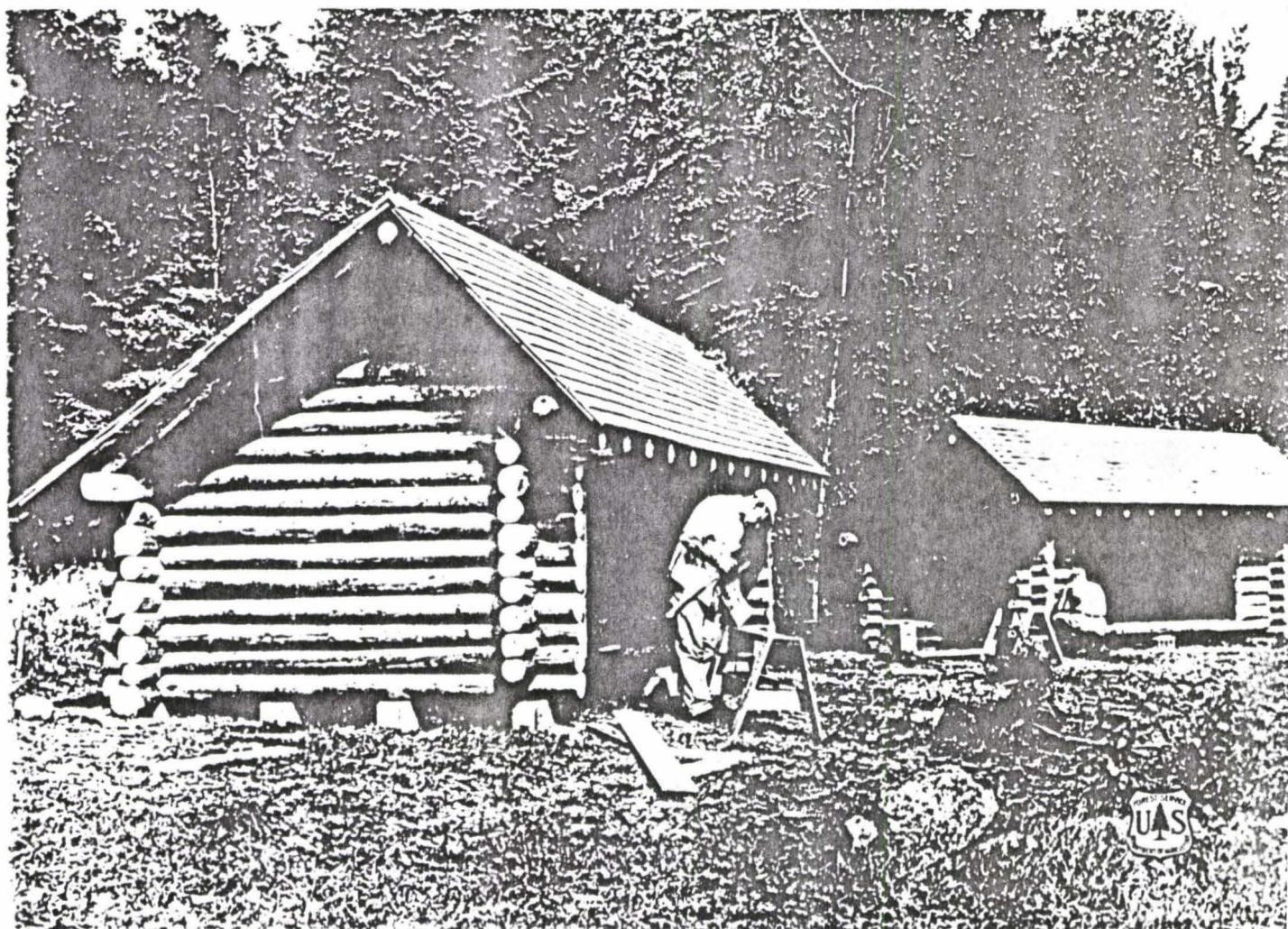
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# HIKING TRAIL SHELTERS AND THEIR MANAGEMENT

THERRIEN

on the

## WHITE MOUNTAIN NATIONAL FOREST



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AND THEIR MANAGEMENT  
ON THE  
WHITE MOUNTAIN NATIONAL FOREST

NED THERRIEN  
PUBLIC INFORMATION OFFICER  
WHITE MOUNTAIN NATIONAL FOREST  
BOX 638  
LACONIA, NEW HAMPSHIRE  
03247

CLEMSON CLASS OF 1986

JUNE - 1987

This paper was prepared as a student project in partial fulfillment of the requirements of the Professional Development for Outdoor Recreation Management Program at Clemson University. It in no way reflects USDA Forest Service policy nor are the opinions expressed those of anyone other than the author.



AUTHOR: NED THERRIEN  
PUBLIC INFORMATION OFFICER  
WHITE MOUNTAIN NATIONAL FOREST  
BOX 638  
ACONIA, NEW HAMPSHIRE 03247  
(603) 524-6450

TITLE: HIKING TRAIL SHELTERS AND THEIR MANAGEMENT ON THE  
WHITE MOUNTAIN NATIONAL FOREST

ABSTRACT: The first trailside shelter was constructed on the White Mountain National Forest in 1876 by members of the Appalachian Mountain Club. The shelters were built as the trail system expanded. Although the bark shelters were at first crude structures they protected users from the vagaries of unpredictable and often harsh New England weather and left them free from carrying burdensome canvas tents. With the passage of the Weeks Law in 1911 the White Mountain National Forest was created and the shelter system was expanded. More shelters were built in the 1930's by the Civilian Conservation Corps. By 1966 the Adirondack shelter had become a traditional way of camping with at least fifty-four of the three sided shelters spread across the Forest at different elevations in 1966.

Heavy backcountry recreation use on the 1960's and 1970's caused serious resource and public health problems at the shelters. Many shelters were eliminated and a serious effort began to manage the shelter sites and protect the surrounding resources. A variety of management techniques were implemented including caretakers, fees, sewage composting and fly out, site design, tent platforms and carryin-carryout. Many of these techniques were successful. This paper examines the remaining shelter system and recommends the actions necessary to improve the shelter camping experience and protect the associated resources. It also addresses the need to keep or remove each of the remaining thirty-six shelters.

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## EXECUTIVE SUMMARY

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**AUTHOR:** NED THERRIEN  
PUBLIC INFORMATION OFFICER  
WHITE MOUNTAIN NATIONAL FOREST  
P.O. BOX 638  
LACONIA, NH 03247

### SUMMARY:

The first three sided, hiking trail shelter in the White Mountains was built in 1876. As the trail system expanded the number of shelters increased. Construction of the individual shelter changed from a fragile sapling frame with bark walls and roof to a more substantial building with log or sawn lumber sides and shingle covered roof. The number of shelters, scattered widely across the National Forest at all elevations, increased to about 60 structures.

In the 1960's and 1970's use of the White Mountain National Forest backcountry increased tremendously with an equal increase in shelter use. With the use came multiple problems. Deterioration of vegetation and soils around the shelters, trash, pollution from sewage, overcrowding and vandalism were a few of the problems managers attempted to solve.

The Appalachian Mountain Club and the Forest Service cooperated along with other shelter maintainers to implement new management techniques. Caretakers, fees, tent platforms, composting and fly out of sewage, law enforcement, Carry in - Carry out, restricted use areas, and information services were a few of the techniques that were implemented. A number of shelters were eliminated because of pollution or over use problems.

Wilderness legislation in 1964 and 1975 created two wildernesses (Great Gulf and Presidential Range - Dry River) that contained a number of shelters. The management direction has been to remove all man made facilities from wilderness. Five shelters were eliminated.

National Scenic Trails legislation in 1968 generated closer management attention to the Appalachian Trail, along which long-distance hikers relied heavily on the Adirondack shelter for overnight accommodations.

By 1986 shelter use had begun to decline. The Land and Resources Management Plan for the White Mountain National Forest was completed but the future of the shelter system was unclear. Thirty-six shelters existed. Nine of these were inside wilderness. A number of shelters had been ignored long enough that sewage, water quality, and vegetation were again becoming problems.

The research for this paper covered these different avenues:

a. A review of the literature to better understand the history of the shelter system in the Northeast. This will give the manager a greater appreciation for how and when the system developed and why it is important to the user.

A review of literature related to shelter management. This will give the manager a better understanding of what has been done to manage existing sites and what new techniques might be applied.

b. A detailed questionnaire was sent out to all Forest Service managers and cooperators in the White Mountains to collect information on the current status (physical condition) of individual shelter sites.

c. Twenty-five shelter sites were visited in the field to make some personal observations on shelter conditions and values of the shelter experience.

As a result of the research recommendations were made on all thirty-six of the remaining shelters and suggestions were made for additional locations where shelters could be constructed. Nine recommendations of a forest wide nature were also made. The most important of these would involve an effort to develop a site design for each shelter location to include prescriptions on capacity, facilities, water quality and quantity, vegetation, soils and sewage disposal. The development of a shelter ethic to be posted at each shelter is also suggested.

The individual shelter recommendations include the following:

- Twenty five shelters should be kept and maintained in a quality manner. Ten shelters of these are along the Appalachian Trail.

- Four of the twenty five existing shelters should be moved to a new location.

- Ten shelters should be removed and not replaced. Eight of the shelters to be removed are currently inside the boundaries of three wildernesses.

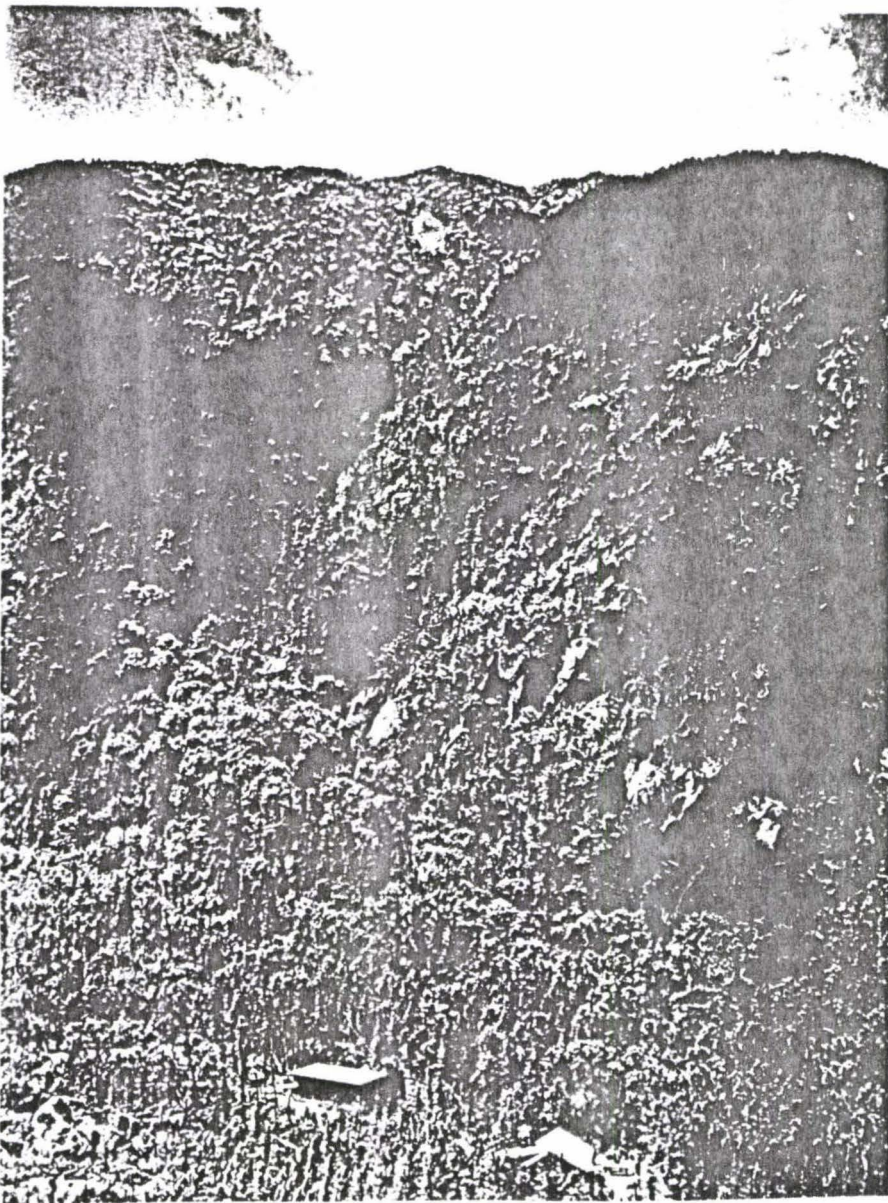
- Two shelters should be removed that are not meeting manager or user expectations of the shelter recreation experience.

- Ten of the existing shelters have full or part time caretakers. It is recommended that caretaker service be expanded at two locations and backcountry patrol visits be increased at all locations.



# CHAPTER I

## Introduction





## I. INTRODUCTION AND STATEMENT OF PURPOSE

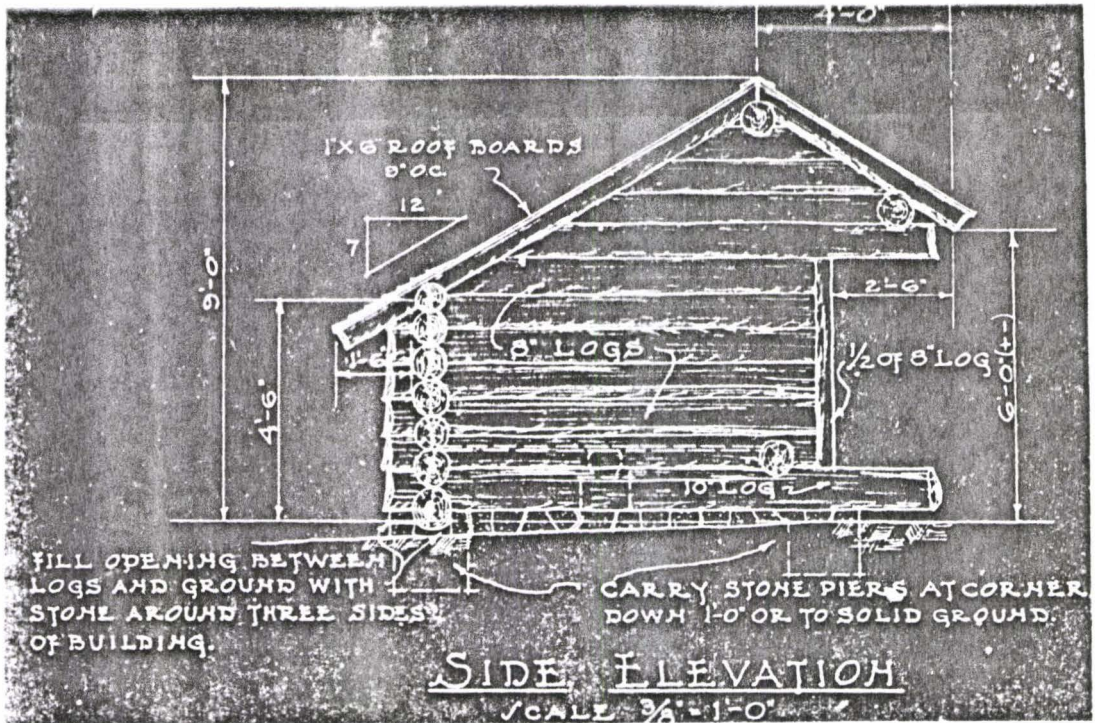
Shelter has played a crucial role in human development. It has been essential to our safety and well being. Webster's Dictionary defines shelter as:

SHEL'TER n. [origin unknown]: something that covers or affords protection esp. from the elements: something that provides refuge or defense (as from injury, exposure, observation, attack, pursuit, danger, or annoyance): a structure (as a small building in a park) used as a refuge in bad weather.

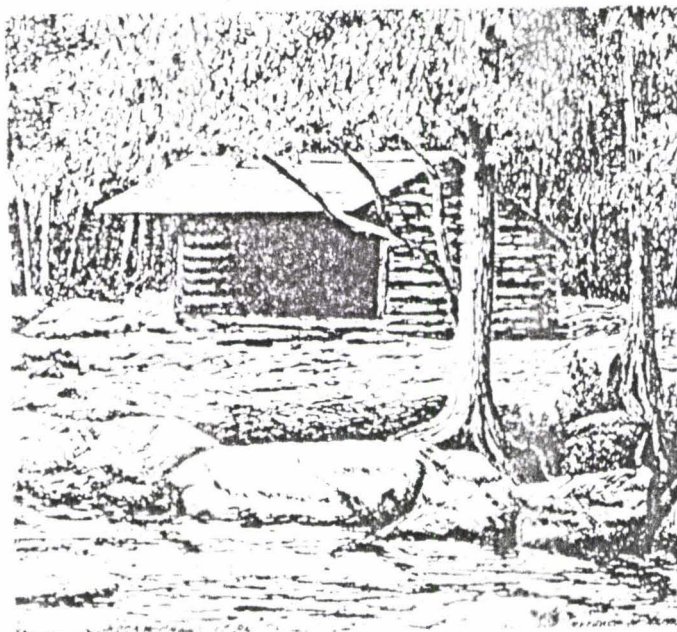
This paper traces the history and use of a unique, three-sided structure known as the Adirondack shelter (See Figure 1) used by explorers, hunters, and now modern recreational campers. Although the Adirondack shelter is used in many areas of the United States, this work focuses on the past, present, and future of these facilities in the White Mountain National Forest of New Hampshire and Maine. (see Figure 2)

The White Mountains are a heavily forested and rugged extension of the Appalachian Mountain chain. Mount Washington, the highest peak in the Northeast at 6,288 feet, towers over range after range of granite faced, steep sloped mountains.

<sup>1</sup> References will be cited at the end of each chapter.



U. S. DEPARTMENT OF AGRICULTURE  
FOREST SERVICE  
FOREST CAMP  
ADIRONDACK SHELTER





# WHITE MOUNTAIN NATIONAL FOREST

## VICINITY MAP

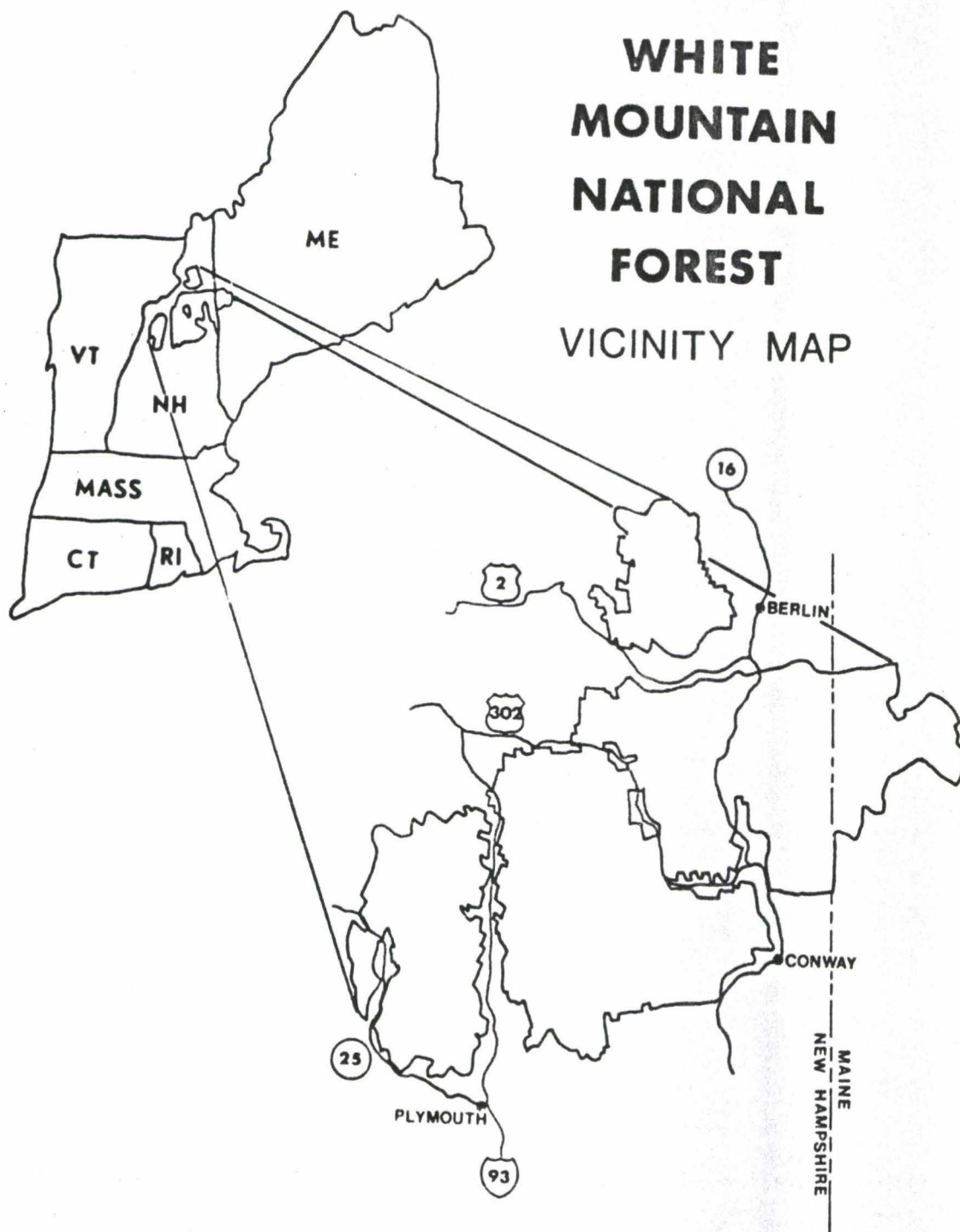


FIGURE 2



Weather in these mountains varies from mild, temperate summers in the valleys to some of the most severe weather in North America in the higher elevations. Winters are long with deep snow normally punctuated with mid-winter thaws and rain. Moisture is abundant year round.

The birch, beech, and maple forests growing on deep soils in the lower elevations give the White Mountains their share of the brilliant New England autumns. Intermixed are hemlock and white pine. In the higher elevations spruce, balsam fir, and birch culminate in the low, wind-formed "Krummholz" (German for "crooked wood") vegetation as tree line is approached. Alpine areas with a variety of tundra vegetation and shallow stony soils are found in both the Franconia and Presidential Mountain ranges.

The heavily populated Eastern megalopolis is within a day's drive of the White Mountains. This accounts for the heavy use that the area receives--some 2,295,000 visitor days\* of use in 1986.<sup>2</sup> Much of this use is related to hiking, backpacking, and cross-country skiing and these are the recreationists who use the shelter system that was developed over the past one hundred and ten years.

As the population of New Hampshire and Maine and the rest of New England grows, more people will use the White Mountains. More people will hike, backpack, and ski. What importance does the venerable Adirondack shelter hold for the quality of the recreation experience? Is the Adirondack shelter an important management tool today and will it be in the future?

\* One visitor day equals twelve hours of recreation use.

The White Mountain National Forest is managed under the direction of the Land and Resource Management Plan.<sup>3</sup> This paper is identified in the Plan as a project under Backcountry Sites, VII-A-38, Ten-Year Implementation Schedule.

The Forest Plan did not deal with Adirondack shelters on a Forest-wide basis. The status of a few shelters are addressed in the project implementation portion of the plan and in guidelines for managing Wilderness and the Appalachian Trail.

The purpose of this paper is to review the social and recreational needs for shelters and examine each of the thirty-six existing shelters, recommending management actions.

## References

### Chapter I

- 1 Webster's Third New International Dictionary, 1981. G & C Merriam Co. p.2093.
- 2 Recreation Information Management Report 2300-1R1, Recreation Use RVDS by ROS Class - White Mountain National Forest, 1986.
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# CHAPTER II

## History

*Evergreen  
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only  
one  
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survive  
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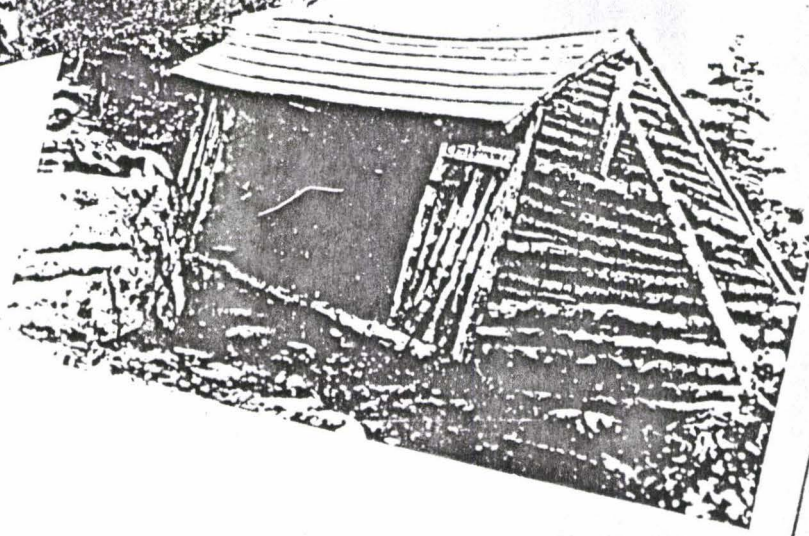
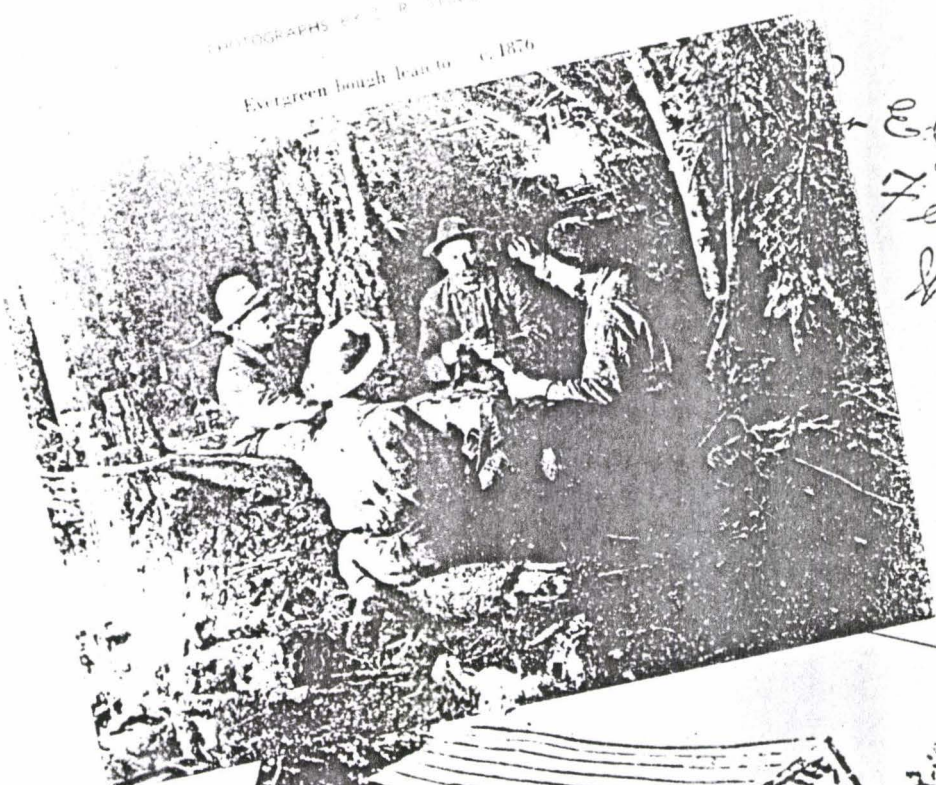
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PHOTOGRAPHS BY E. R. STODARD  
Evergreen bough loan to C. 1876

Edgar L. Lormance  
Fennell  
Woodland  
New Hampshire





## II. HISTORY OF THE WHITE MOUNTAIN SHELTER SYSTEM

### A. The Early Days 1840 to 1900

Late on a warm, overcast July day deep in the forest of the Presidential Mountain Range, a small group of intrepid hikers and trail builders worked hard to complete their evening camp. Cutting supple, pole size birch they erected a sparce framework. Nearby were large hemlock. These trees were scribed deep enough around the base to sever the bark. Another similar out was made as high up as a man could wield the axe. A vertical out then allowed the bark to be pried off with knife or axe in large sheets. The "squares" of bark were then used to shingle the roof and the frame of the shelter.

Balsam boughs were cut from nearby fir trees and laid in deep piles on the ground in order to raise the supine sleeper off the damp and rocky ground. The shelter was now complete and the campers could tend their fire, cook supper and be secure, knowing that their shelter would protect them from the rain and wind of unpredictable mountain weather.

The year was 1876. The bark and birch frame shelter was constructed beside Lowes Path, the first mountain hiking path built by members of the newly formed Appalachian Mountain Club (AMC).

Those primitive trailside shelters were essential. They were the only alternative to finding an overhanging rock or a dry spot under a large fir or hemlock tree. Tents were available but they were heavy and bulky and not very reliable in wet weather. In spite of the lack of what we would nowadays consider reasonable camping equipment, there was a growing demand for access to the mountains and the associated recreational and aesthetic experiences.

The builders of Lowes Path, Charles E. Lowe (Guide) and William E. Nowell (First Councilor of Improvements for the AMC) used the shelters as base camps from which the trail layout and clearing took place.<sup>2</sup> It wasn't long before their trail to the top of Mount Adams was being used by a variety of men and women visitors, mostly summer residents from the town of Randolph and the large hotels in the northern White Mountains. In that first summer the shelter on Nowells Ridge received 142 visits from 54 people including 76 overnights from 37 people; a surprising number considering the time and effort it took just to arrive at the trailhead.<sup>3</sup>

Although the Lowes Path shelters are the first specifically named and located in the literature of the White Mountains, the art of shelter building had been developed by our native forebears, and used later by the white explorers and guides.

The early leaders of the AMC were anxious to open more trails to more mountain tops in the White Mountains and set about the task in an organized and determined manner as evidenced in this first Annual Report in 1876:

It is suggested that permanent camps be established by members of the

Club at such points of interest in its work as Mount Adams or the East Branch of the Pemigewasset. Such camps will serve as centers for the working parties and may be built so as to last several years. A bark camp, well constructed, would do service, with a few repairs, more than one summer; but a log and board camp much more permanent can be made at a trifling cost.

The importance of a system of shelters was recognized by the officers of the Club both to orderly trail development and to the enjoyment of hikers. Many of the early hiking parties had local men as guides to carry the heavier burdens and erect the shelters which took some knowledge of the woods, strength of arm, and skill with an axe.

The early members of the Club met this situation [longer overnight trips] by packing a camping outfit and by devoting a considerable portion of their time in the field to the making of a camp. Delightful as is this kind of woodcraft, it is obviously beyond the ability or resourcefulness of many who would otherwise enjoy an extended trip afoot in rough country.

By 1886 four "permanent" camps existed along AMC trails and were located at Mt. Adams, Tuckerman Ravine, Carter Notch, and Carter Moriah. However, the camps seemed to be a regular maintenance problem as the fragile structures were frequently blown down in windstorms and most likely flattened by heavy snows. The interest in more substantial and "liveable" shelters is shown by the mention of log and board shelters above and the common plight of campers using boughs as an easy substitute for bark as a roof.

The fir bough would keep out about as much rain as a lawn tennis net, and even the best lawn tennis net will leak in a heavy rain. We estimated that the roof of fir boughs would leak for four days after the rain had ceased.

The three-sided bark shelter was used widely throughout the White Mountains of New Hampshire and Maine and the Northeast by hunters, fishermen, and hikers through the late 1800's and early 1900's.

In the 1890's a more formalized shelter design began to take shape in the Adirondack Mountains of New York. Shelters or "shanties" were commonly built by guides as places to overnight "wealthy" hotel guests. The shanty was

an improvised crotched-pole framework covered with brush, hemlock or spruce bark, evergreen boughs and occasionally with split, hollowed out sections of medium sized trees called "Yankee Trough" roof.

The shanty evolved into what became known throughout the Northeast as the Adirondack Shelter or Lean-to. This design included more permanent, round spruce logs on three sides, a sloping and overhanging roof, and a plank floor.



This same design with some variations has remained with us as has the name. By 1970 the Adirondack Forest Preserve in upper New York state had some 235 of these shelters spread across the mountains and lakes.

In the White Mountains the shelter concept had been carried one step further to the building of camps. The camps were normally enclosed, four sided structures and sometimes included equipment such as bunks or stoves. The camp idea, probably because of the extra cost and effort to build and, later on, the problems of vandalism, never became widespread.

#### B. The Conservation Era and the National Forest 1900-1940

At the turn of the century most of the land in the White Mountains was owned by lumber companies engaged in systematically stripping the slopes of their timber from valley bottom to mountain top. Using all of their Yankee ingenuity, the lumber barons ran tracks up the main stream corridors and used steam locomotives to haul the spruce and white pine to the nearby mills. The locomotives, belching smoke and cinders, set fire to the deep logging slash left everywhere in the wake of the harvest.

The destruction of the White Mountain forest brought a well organized response from the many individuals and organizations that had developed strong attachments to the resources and aesthetics of the area. This concern resulted in the formation of the Society for the Protection of New Hampshire Forests and a successful effort to bring a National Forest to the White Mountains through passage of the Weeks Law in 1911.

The United States Forest Service began to acquire large tracts of land in 1912 and by 1917 the White Mountain National Forest contained over 275,000 acres. By 1940 it had grown to over 720,000 acres.

Many of the shelters that exist today are the modern versions of an original bark shelter built by a local guide at that same location. Prior to 1877 "Jock" Davis, a local fishing and hunting guide, built a shelter next to one of the lakes in Carter Notch. That shelter was followed by several AMC and Forest Service shelters before Carter Notch Hut was built in 1914. The open shelter never really worked well in Carter Notch because of the unpredictable winds that bounced off the steep rock faces and blew the acrid wood smoke in on the campers. This resulted in an old shelter being "given" to the Forest Service in 1914.

The smokey camp at Carter Notch, in which many tears have been shed by its innocent victims, has been presented to the United States Forestry Department and its place taken by a new camp.

Evidently, the AMC felt that the "newcomer" Forest Service personnel deserved to shed a few tears while learning of the vagaries of their White Mountains.

In 1917 the AMC signed an agreement with the Forest Service relinquishing responsibility for maintaining some trails and shelters. This allowed the Club to use its resources for other work in the Mountains. That the Forest



Service was now involved in administration of activities in the Mountains seemed to bring about an increased effort by the AMC to do more planning and thinking about systematic development of a shelter system.

With the increasing use of trails comes the call for more camps and shelters. The Forest Service is now maintaining two camps, and has expressed a desire to know the Club's plans for the future, as well as to prevent cutting of timber at spots particularly fitted for camp sites. <sup>13</sup>

The AMC Councillors for Improvements (trails and shelters) were all volunteers, most of them living in Massachusetts, who made sporadic trips to the White Mountains to lead other volunteer trail maintainers and check on work that had been contracted. Each councillor added trails and shelters according to his (the early councillors were all male) personal ideas or the desires of his constituents. Because of this situation the work that was done wasn't necessarily based on any use or resource priorities.

The annual appropriations made by the Club for trail and shelter work were small but grew each year. Most of the shelter construction work was done by local men -when they could be found and had the time-because they had the necessary skills.

In 1921 a committee was appointed to study the trails and shelter problem and to try and develop a more orderly process.

This committee, . . . recommended the development of a trunk line from Lost River to Grafton Notch, provided <sup>14</sup> with such shelters and huts as should be necessary and practicable.

During that year the AMC Council adopted a policy for shelter locations and recommended:

That two open shelters a year be built until there are enough. <sup>15</sup>

By the end of 1924 the dream of an across-the-forest system was becoming a reality. Three shelters were constructed in the Mahoosuc Range by hired crews. The new shelters at Gentian Pond, Full Goose (Fullington Mill Mountain), and Speck Pond were peeled logs laid notch down with a bark roof. Although the roofs had to be regularly replaced this was considered an economical form of construction. <sup>16</sup>

A series of connected trails now stretched from Mount Moosilauke on the west side of the National Forest to Grafton Notch just across the Maine-New Hampshire border. This spectacular pathway followed the highest peaks and would one day become part of the Appalachian National Scenic Trail. By 1928 sixteen shelters had been constructed along or adjacent to these trails as well as four AMC huts. Even as this system was being completed the leaders of the Club had more grandiose plans.

Our main routes are now well equipped with shelters at reasonable

intervals, and no additional ones are contemplated at present. The old tendency was to place shelters a full day's tramp apart. While such an arrangement was satisfactory to vigorous trampers in good weather, it did not make the trail attractive to less strenuous persons, or in the case of half days bad weather, and the present policy<sup>17</sup> is to provide shelters within a few hours walk of one another, if possible.

Time would show that neither the AMC nor the Forest Service would have the resources to provide shelters at a more frequent interval than one day's walk. The campers would come anyway.

On April 5, 1933, Franklin Roosevelt issued Executive Order #6101 which established the Civilian Conservation Corp (CCC), "to relieve distress, unemployment, restore depleted natural resources, and advance an orderly program of public works." The country was in the depths of its worst depression in history.

Within days after President Roosevelt signed the Order, CCC camps were receiving corpsmen and beginning work projects. New Hampshire was a beehive of activity, with camps set up on state, private, and National Forest lands. Most of the camps were located in the White Mountain National Forest; it had a total of 17 camps during the 9-year life of the program, which ended in 1942. Camps in the White Mountain National Forest were located at Gale River, Wildwood, Warren, Chatham, Cold River, Sawyer River, Wild River (Hastings), North Woodstock, Tripoli, Saco River, Stark, Passaconaway, Peabody, Thornton, Swift River, Campton Pond, and Kilkenny. Several camps located outside of the forest also provided manpower, such as the camp located in Tamworth on the Hemenway State Forest. New Hampshire camps alone gave employment to over 22,000 men.

To qualify for the CCC, a young man had to be unmarried, between the ages of 17 and 23, unemployed, and with his family on relief rolls. Many of the positions were filled by local men, but the majority came from the urban areas such as Boston where the needs were greatest.

Local experienced men such as carpenters, masons, and woodsmen were hired by the Forest Service as foremen and supervisors. At the Wild River camp located at Hastings, Maine, some 48 craftsmen were hired from Berlin, Milan, Stark, Randolph, and Gorham. This succeeded in getting the support of the local communities and high quality supervision for the corpsmen.

The sudden influx of manpower into the White Mountains allowed projects to be undertaken that would not have been done except for the CCC.<sup>18</sup> The shelter system in the White Mountains expanded greatly. Twenty-one shelters were built as well as several backcountry cabins. A number of shelters were improved or reconstructed. The Hermit Lake shelters in Tuckerman Ravine were expanded and renovated. A number of downhill ski trails were cut on Mount Chocorua, Cannon, Washington, Wildcat, and at other locations,<sup>19</sup> and shelters or cabins built to provide protection and allow overnight stays.

The reconstruction in 1939 of Liberty Shelter, after its destruction in the 1938 hurricane, was a major task and a good example of the cooperation between the Forest Service and the AMC. It also demonstrated the hard work and pride that



was generated by the men that built them:

The foundation of the old shelter had to be replaced entirely, and the new foundation was put in on bedrock and laid in cement. This necessitated much digging, but a lasting base is now supporting the new shelter.

Verne Samson, the trail crew's veteran lumberjack, engineered the construction of both Liberty and Guyot shelters. Despite Uncle Verne's seventy-one years, he roused us out of our bough beds at five o'clock in the morning. The day's work ended thirteen hours later. We often went back to some unfinished task till the sun set. After sunset, around the dying embers of our campfire, the grizzled old woodsman told many a yarn of bygone lumbering days.

The AMC crew hewed and laid the logs as fast as they were brought in by the "Mountain Boys," as the government crew styled themselves. Joe Dodge's donkeys kept the crew supplied with materials from down the mountain, and in two weeks the new Liberty Springs Shelter was opened to the public. <sup>20</sup>

### C. Americans Discover the National Forests - The Environmental Era 1950 - 1980

During the war years and into the 1950's little use was made of the White Mountain backcountry and little maintenance was done. Then people began to rediscover the outdoors. From the 1950's into the 1970's use and attitudes concerning the White Mountains went through some major changes. People found more time and money to spend hiking and camping. The importance of these experiences, our attitudes towards the environment, and the consciousness of our own physical well being was raised by the sweeping changes effecting our society. Use increased on the trails steadily into the 1960's and 1970's. The advent of lightweight camping gear such as nylon tents and aluminum frame backpacks made hiking long distances easier. The Interstate Highway system reached the mountains, and now Boston and New York City were just a few hours away.

In the past five years [since 1963] we have experienced a great increase in the usage of our shelter facilities in the White Mountain area. Our ten to twelve man shelters are not suitable for the all-too-frequent occurrence of twenty to one hundred hikers attempting to use them for overnight accommodations during the peak<sup>21</sup> periods of summer holiday weekends and the month of August.

In 1970 there were 47 shelters being maintained by seven different organizations. All of these facilities were impacted to some extent by the increased use as described below:

The soil is compacted, vegetation is getting sparse, and young plants are not coming in to replace those killed by trampling. Trees are being hacked. Toilets need to be replaced or repaired and new ones installed where they do not pollute groundwater, streams, ponds, and marshes. Garbage pits fill up much quicker

now. Litter abounds in many places. Water supplies, critical to all hikers, are endangered by overuse and contamination of the surrounding area. Safety requires a sampling program to monitor quality. Boiling or other means of bacteria removal are now recommended. <sup>22</sup>

The AMC and the Forest Service began a major effort that would change the camping experience, the campsites, and the way people thought about camping and hiking in the White Mountains.

The Carry In - Carry Out program was started with a great deal of fanfare in 1970. It worked. Within the next two years tons of trash had been carried out of the backcountry.

The first caretaker was stationed at Liberty shelter in 1970 and a charge was made for overnight use. The success of this program would be exported to other heavily used sites across the White Mountains.

Between 1970 and 1975 major renovation work was done on shelter sites. New shelters were built; a number of shelters were removed and the sites closed. Both the AMC and the Forest Service began research into new and better ways to dispose of human waste, educate backcountry users, and design shelter sites. A Restricted Use Area program began in 1972 which formally designated areas above tree line, some trailside zones, and other fragile or impacted sites as being off limits to camping. Law enforcement came to the backcountry with backcountry patrolmen for the first time empowered to issue citations for various abuses such as cutting green trees.

In September of 1964 Congress passed Public Law 88-577, The Wilderness Act.<sup>23</sup> This legislation would have a major effect on how large parts of the National Forest System would be managed, specifically for the preservation of their wilderness character. On the White Mountain National Forest there are four designated Wildernesses, including the Great Gulf (1964) at 5552 acres; the Presidential Range-Dry River (1975) at 27,380 acres; the Sandwich Range (1984) at 25,000 acres; and the Pemigewasset (1984) at 45,000 acres. All four of these Wildernesses have had or presently have Adirondack shelters within their boundaries.

This situation will be examined in more depth in Chapter IV.

The National Trails System Act (P.L. 90-543) was passed on October 2, 1968, and The Appalachian National Scenic Trail (AT) was created.<sup>24</sup> The Comprehensive Plan for the Trail includes a definition:

The Appalachian Trail is a way, continuous from Katahdin in Maine to Springer Mountain in Georgia, for travel on foot through the wild, scenic, wooded, pastoral, and culturally significant lands of the Appalachian Mountains. It is a means of sojourning among these lands, such that the visitors may experience them by their own unaided efforts. <sup>25</sup>

Some one hundred miles of this trail lie within the boundary of the White Mountain National Forest. The Adirondack shelter has become an important part of the Appalachian Trail experience.



By 1980 the number of shelters on the National Forest had been reduced to 36. Several shelters had been removed because of pollution problems, others because they were inside the boundaries of a wilderness, a few because of vandalism or inappropriate use, and several had just deteriorated and were not replaced. The ability of the Forest Service and its cooperators to sustain a large system of shelters was being reduced by the high costs of maintenance and the increasing complexity brought on by more users, which requires more intensive management.

#### D. The Shelter System 1876 to 1981.

The following list of shelters in the White Mountains are those which are identified in the literature and were named. Many of the shelters such as Adams existed for only a few years. Some of the shelters have been located at more than one place such as Garfield Ridge, which was moved from its first location at Garfield Pond. A few shelters were preceded by cabins of the same name at the same or nearby locations such as Caribou and Perkins Notch. Several of the early shelters were enclosed and used in the winter, such as Sandwich Dome, but allowed to deteriorate and were never replaced. The last new shelter to be built on the White Mountain National Forest was Jeffers Brook, located on the Appalachian Trail and built and maintained by the Dartmouth Outing Club under a Special Use Permit from the Forest Service.

#### Year of Construction for White Mountain Shelters <sup>26</sup> 1876 - 1981

1876 - Adams  
1877 - Carter Notch  
1879 - Hermit Lake  
1883 - Imp  
1890 - Log Cabin  
1891 - Camp Rich  
1892 - Cascade Camp  
1892 - Cliff Shelter  
1893 - The Perch  
1899 - Camp Shehadi  
1901 - Sandwich Dome  
1905 - Liberty  
1909 - Great Gulf #1 (F.S. Shelter built in 1917)  
1912 - Camp Heermance  
1912 - Resolution  
1912 - Isolation  
1912 - Old Shag Camp  
1913 - Guyot  
1915 - Mizpah Spring  
1917 - Upweekis  
1917 - Garfield Ridge (Pond)  
1921 - Kinsman  
1923 - Zeacliff  
1924 - Eliza Brook  
1924 - Full Goose  
1924 - Gentian Pond

1924 - Speck Pond  
1925 - Blue Brook  
1925 - Gale Head  
1926 - Trident  
1926 - Carlo Col  
1933 - Greeley Pond  
1936 - Rocky Branch #2  
1936 - Rocky Branch #1  
1936 - Pequawket  
1936 - Perkins Notch  
1936 - Dry River #1  
1936 - Dry River #2  
1936 - Dry River #3  
1936 - Black Mountain  
1936 - White Ledge  
1936 - Mt. Lagoon  
1936 - Blueberry Mountain  
1940 - Russell Pond  
1940 - Beaver Brook  
1940 - Three Ponds  
1940 - Province Pond  
1940 - Last Chance Spring (Baldface)  
1940 - Coppermine (Bridal Veil)  
1940 - Mountain Pond  
1940 - Wild River  
? - Camp Nine  
1948 - 13 Falls  
1948 - Franconia Brook  
1949 - Desolation  
1957 - Perkins Notch  
1957 - Ethan Pond  
1958 - Camp Fatima  
1959 - Great Gulf #2  
1963 - Rattle River  
1963 - Wachipauka Pond  
1963 - Spruce Brook  
1964 - Flat Mountain Pond  
1964 - Nauman Shelter  
1964 - Caribou (Replaced cabin - 1921)  
1966 - Great Gulf #3  
1981 - Jeffers Brook



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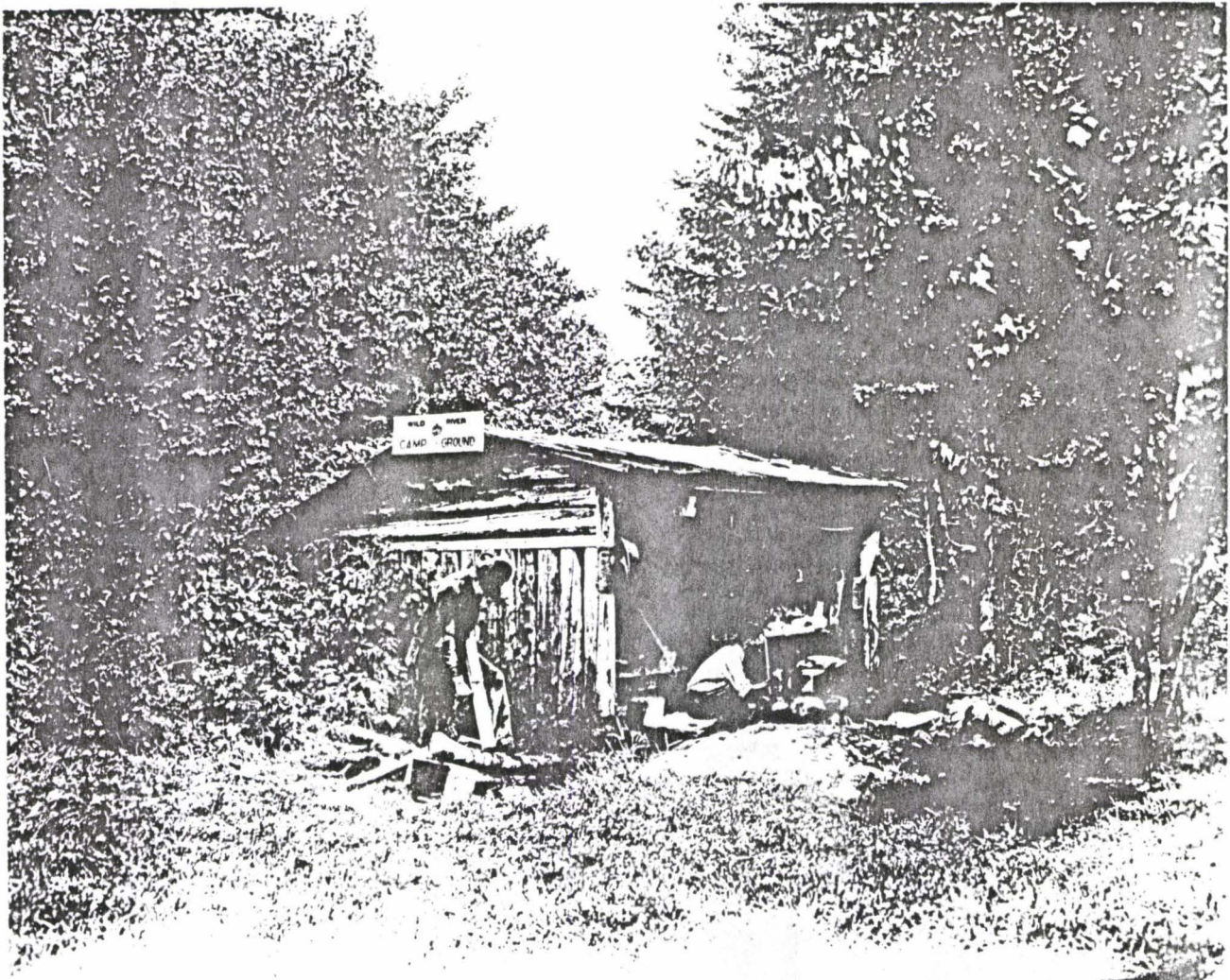
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# CHAPTER III

## The User



### III. SHELTERS AND THE USER

#### A. Human Needs and the Trailside Shelter

To many people who hike and camp in the White Mountains the Adirondack Shelter, perched on a streambank next to clear rushing water, fulfills or comes as close to meeting their idyllic image of the wilderness cabin as they will ever come.

Our society has nurtured the image of the frontier life, the mountain men, and the wresting of a living from the wilderness; the remote cabin and the lean-to shelter are an integral part of this image.

Movies and novels glorify the shelter in the wilderness and the Boy Scout manuals told us how to build one. Today a popular building option for family dwellings is the "Lincoln Log" home, a throwback to an earlier architectural style. The backcountry camper in New England has grown up with the image and the Adirondack Shelter.

Nearby a spring bubbled forth delicious water and a short path tied into the main hiking trail only 1/2 mile from a fantastic view and ten miles from the nearest road. This facility was identified on the trail maps and the backpackers came. When a hiker arrived in the early evening, he may have found two or three people already there or, quite likely, an empty site with the shelter swept clean and a few food staples stacked neatly in the corner by the previous thoughtful camper. This was, and to many still is, the ideal campsite.

Sigurd Olson expressed a belief in his classic book, "The Singing Wilderness," that modern man is "marked by wilderness," that the centuries of living as nomads close to the pulse of the earth had left an indelible, subconscious desire to retain that closeness or understanding. He wrote in his book about his experience in a wilderness cabin:

It satisfied a longing for closeness to a primitive environment, the hunger to return for a little while to the wilderness. Centuries of caves, of shelters under the trees, of dry spots beneath ledges and windfalls, of listening to the sounds of the night have left their mark. The cabin was part of all that.<sup>2</sup>

Others have written of the unique characteristics of the three-sided shelter. Unlike the tent, which is confining and separates the camper from directly confronting the elements, the shelter allows protection and, at the same time, the opportunity to feel, see, and smell the surroundings.

The Adirondack lean-to is aesthetically pleasing. Favorably located it seems almost an emanation of the forest floor. As a shelter, its marginal protection against wind, rain, and cold enables you to revel in all the minor inconveniences and discomforts of camp life. You confront, in the precise meaning



of that verb, the essential facts of life, more truly than Thoreau did in his Walden hut. The open front invites big thoughts. Out there, unscreened after the fire dies down, is the untamed wilderness of our ancestors on the continent.<sup>3</sup>

A number of observers have written of peoples' inability to separate themselves from the basic trappings of civilization. Henry David Thoreau and others believed that societies' optimum environment is a blend of wildness and civilization. To the contemporary hiker the shelter may maintain the touch with civilization to which Thoreau referred.<sup>4</sup>

## B. Thru Hikers

The Appalachian National Scenic Trail runs for almost 100 miles through the White Mountain National Forest on its winding way from Springer Mountain, Georgia to Mt. Katahdin in Maine.

A number of people hike the trail each year, normally beginning in Georgia in the spring and ending in Maine in the fall. There are others who hike portions of the trail each year. These people are known as "thru hikers." Their numbers vary from year to year but about 110 thru hikers have completed the entire trip each year for the past six years (1981-1986).<sup>5</sup> Along the length of the trail at regular intervals, approximately one day's hike apart, are 230 Adirondack-type shelters.

Shelters are an integral part of the Appalachian Trail experience for nearly all long distance users of the trail. Hikers tend to organize their hikes by shelter locations and count on them to maintain contacts with other long distance hikers (an important aspect of the experience for most long distance hikers). The common experience of shelters among long distance hikers seems to create more of a bond both with the trail and with other hikers.<sup>6</sup>

The Forest Service and the Appalachian Mountain Club's experiences with thru hikers seem to confirm Maslow's observations in that, after long periods on the trail, thru hikers use the shelters and crave the companionship of other hikers.

## C. Social Conflicts

1. Pets - As use has increased so have the numbers of dogs in the backcountry. In attempting to develop a Forest-wide policy on pets the Forest Service found opinions to be strong both for and against dogs. More comments were received on this issue than any other dispersed recreation concern.

Many people enjoy taking their dog hiking. The pet becomes an important part of the outdoor experience. Dogs are brought to shelters.

Some people see pets in the backcountry as a nuisance and even as threats. Numerous incidents of confrontations between dogs and hikers, dogs and dogs, and hikers and dog owners have taken place.

The current White Mountain National Forest policy on pets is:

All pets in dispersed areas will be under voice command as a minimum, and animals untrained to voice command will be on a leash. At developed sites, Tuckerman Ravine, and other areas as recognized by the Forest Supervisor, all pets will be on a leash. No pets in huts, shelters, or cabins. More stringent regulation efforts will be enforced if these do not work. Dogs are not allowed to run at large except when used for hunting.

2. Vandalism and Public Safety - Theft, assault, or other threats to hikers from other people at shelter sites is an uncommon occurrence. People consider these sites to be safe; however, some serious incidents have taken place at shelter locations along the Appalachian Trail. The most common problem at shelters is littering, cutting of green trees, and defacing of the shelter structure. At sites close to highways, parties and intoxication may be an occasional problem.

Forest Service personnel who have gone through the required training do have law enforcement authority. Not all Forest Service backcountry patrolers and no Appalachian Mountain Club caretakers or volunteers have law enforcement authority.

Female backpackers have expressed the perception that single women or small groups of women may feel safer at a shelter than camping beside a trail. Camping by themselves, they may feel vulnerable to anyone who might pass by. In contrast, a shelter is a public place where other people can arrive at any time. It is likely that if they have to share it, they will share it with more than one group of people meaning they may have some protection from unpleasant experiences.

#### D. Use

Shelter use increased steadily through the 1950's and 1960's and peaked in the mid-1970's.

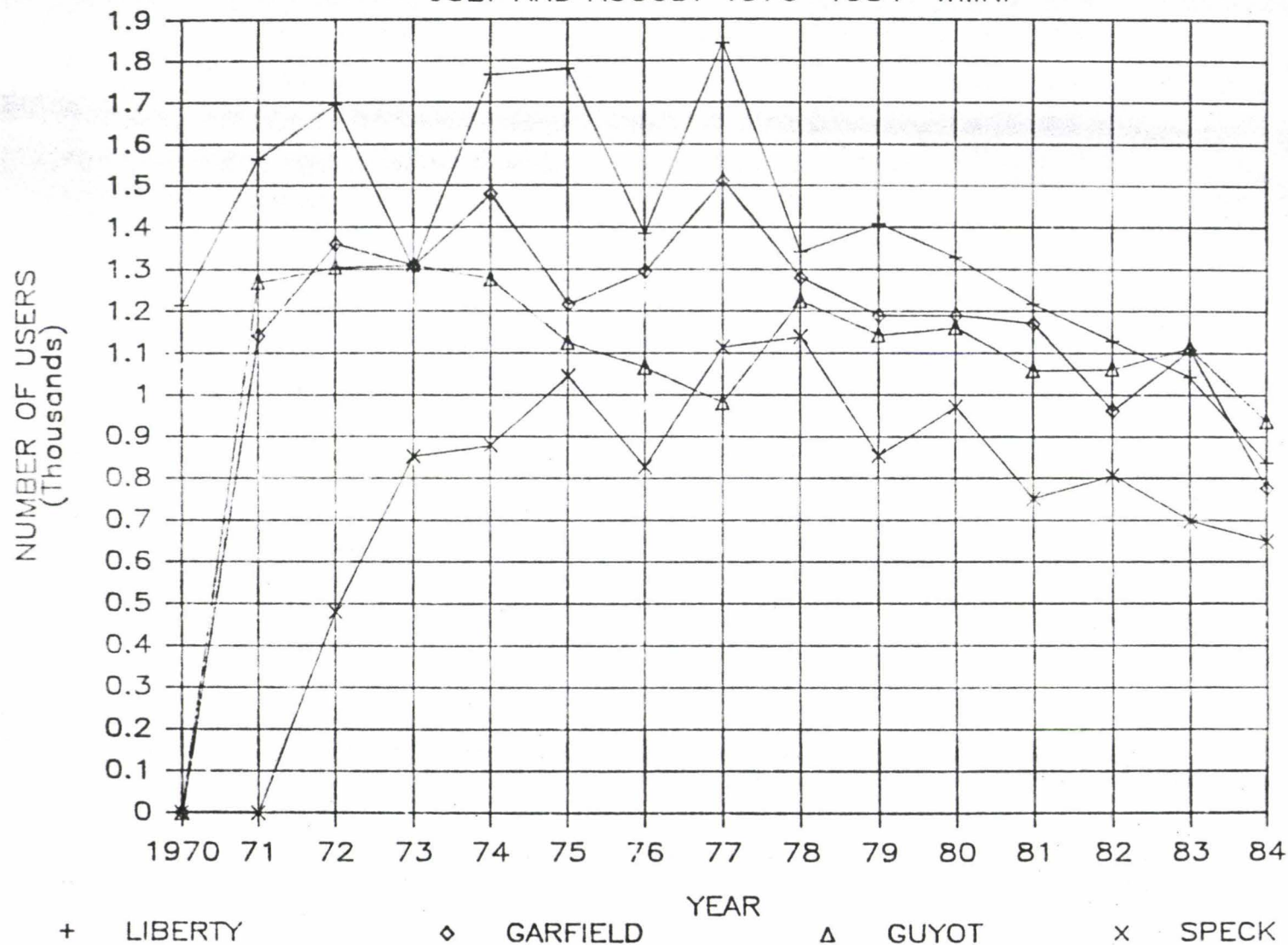
"Three years ago, (1956) the Forest Service estimated that there would be an extensive increase in camping and the demand for shelter facilities by 1960. The actual increase since that time has exceeded 13 percent, and the Great Gulf area has shown at least that much. It was observed that in one week alone this past summer (1959) two consecutive groups of thirty and forty scouts overtaxed the old shelter and site. There were very few nights without occupants of the area."

The Appalachian Mountain Club caretakers at Liberty, Garfield Pond, Guyot, Desolation, Ethan Pond and Speck Pond Shelters have kept careful records of overnight campers. During the period of August 1-17, 1969, the five shelters had 1,140 visits, an average of 14.25 guests per shelter per night. Although these shelters are along the Appalachian Trail, and among the most heavily used, the figures are representative of use during that period [see Table No. 1].



# TOTAL USE FOR FOUR SHELTERS

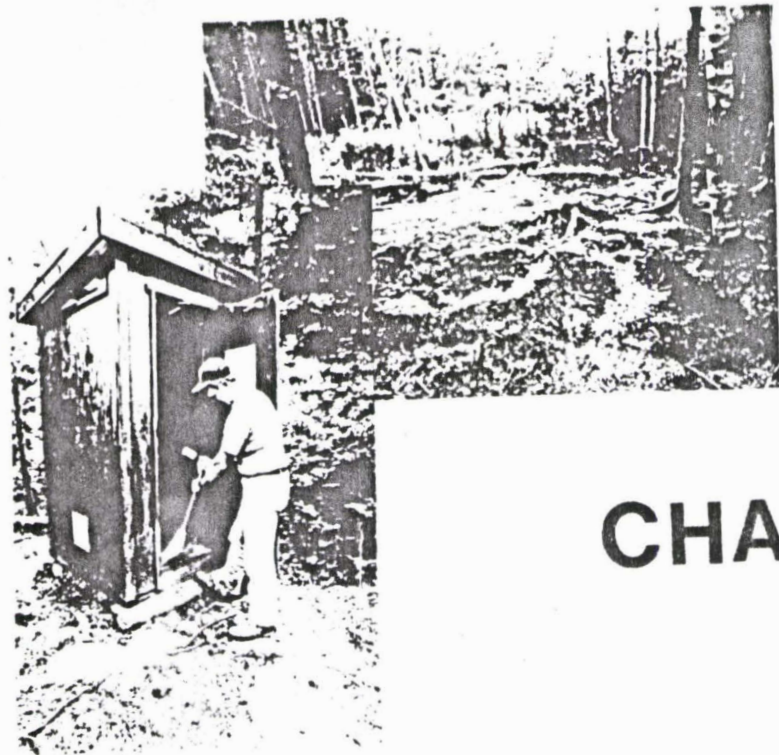
JULY AND AUGUST 1970-1984 WMNF



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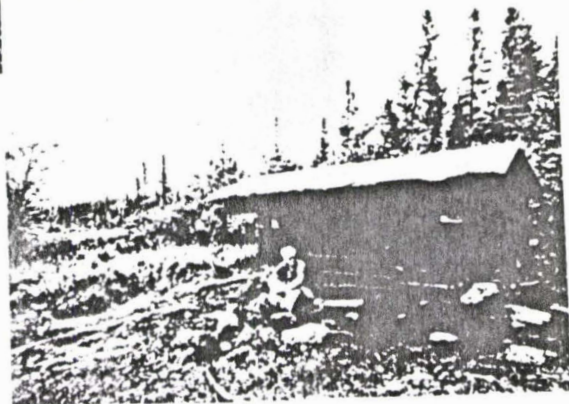
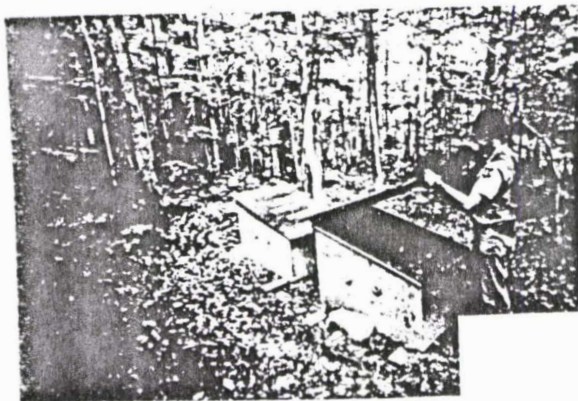
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## CHAPTER IV

# Site Management



#### IV MANAGEMENT OF THE SHELTER SYSTEM

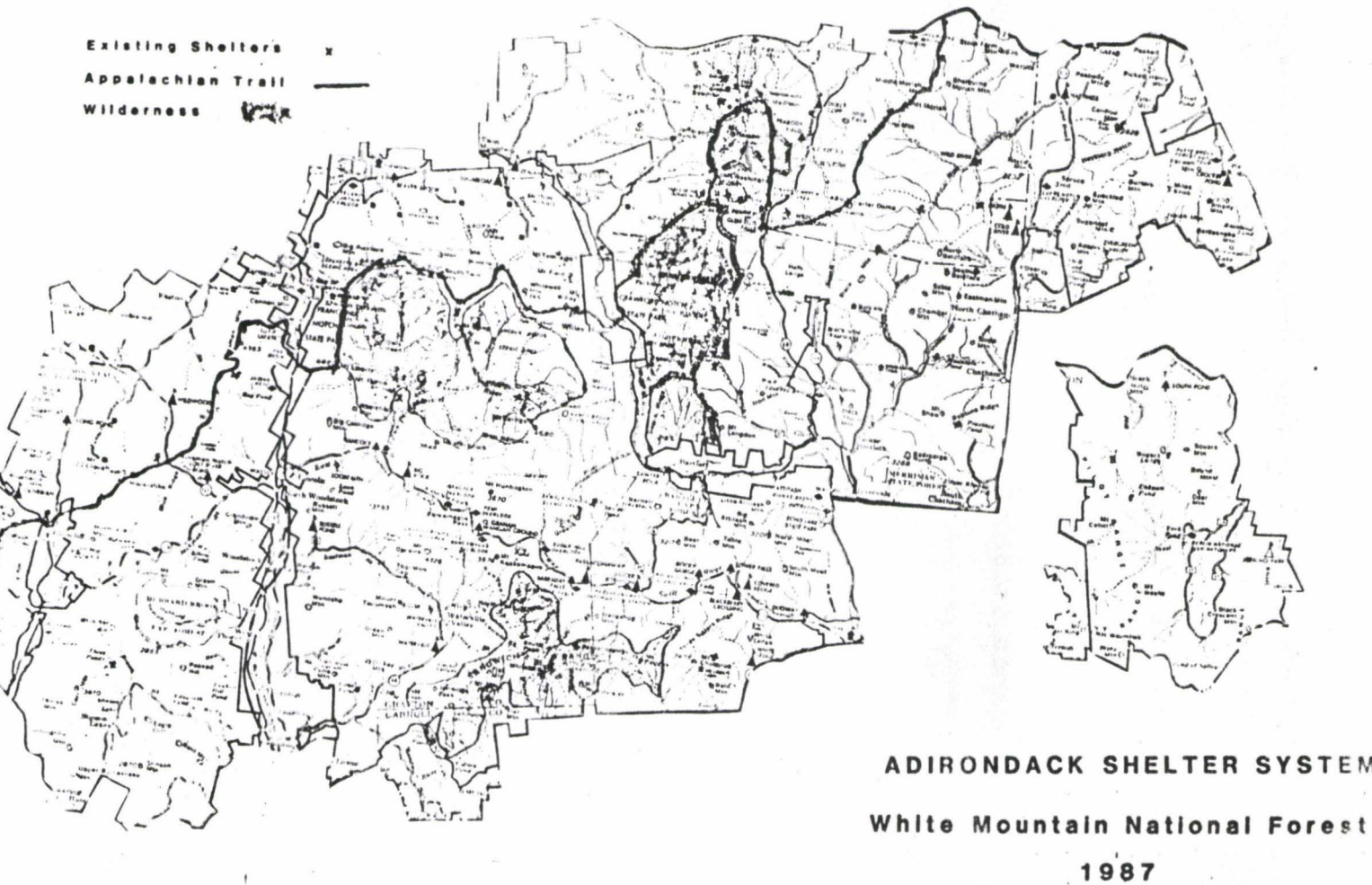
##### A. Overview of the Shelter System

###### 1. DEMOGRAPHICS - 1987

- Number of shelters existing in 1970 on the White Mountain National Forest (WMNF) - 47 (Hermit Lake shelters counted as one site).
- Number of shelters existing in 1986 on the WMNF - 36
- Number of shelters existing in 1986 in the White Mountain area - 40
- Number of shelters below 2,000 feet elevation - 14
- Number of shelters between 2,000 and 3,000 feet elevation - 12
- Number of shelters above 3,000 feet elevation - 10
- Number of shelters on a lake or pond - 9
- Number of shelters currently within the boundary of a Wilderness - 9
- Number of shelters along the Appalachian Trail in the WMNF - 10
- Number of shelters by Ranger District - Saco 12; Pemigewasset 10; Ammonoosuc 2; Androscoggin 5; and Evans Notch 7.



FIGURE 3



MAP - Location of existing trailside Adirondack shelters in the White Mountains. (See figure 3)

## B. Management Direction for Shelters

In making recommendations for a shelter system or a site there are several authorities we must consider. Congress has given some general and some specific guidance to the manager through various laws such as the Wilderness Act. The Chief of the Forest Service has promulgated regulations and direction through the Forest Service Manual. The Regional Forester of the Eastern Region has given direction through the Land Management Plan for the White Mountain National forest.

### 1. FOREST PLAN DIRECTION

The Forest Plan has set Forest-wide goals for managing the recreation resource that we must consider when making decisions concerning shelters. Those goals that might affect shelters are:

Conduct all management activities with full recognition of the appearance of the Forest, realizing the importance to society of a natural landscape distinct from the man-made environments otherwise dominant in the East.

Shelters should be constructed of natural materials as much as possible and the shelter sites managed to fit into the forest landscape.

Feature quality recreation opportunities not likely to be provided elsewhere on other lands.

Public lands are limited in New England. The National Forests (White Mountain and Green Mountain) provide the only trail system, aside from Katahdin and the Appalachian Trail where people can hike long distances in wild areas and have the opportunity to use shelters.

Recognize the need for the Forest user to bear a share of management costs through continued use of volunteer programs, payment for services, cooperative agreements, and voluntary contributions and donations.

There is substantial evidence that land management agency budgets and staff will continue to shrink. The use of volunteers, caretakers, and fee systems at shelter sites has been quite successful.

Conduct all management activities to protect soil and water resources.

The Forest Service must deal with the continued deterioration of water and soil resources at shelter sites.



## a. MANAGEMENT AREAS

The White Mountain National Forest is divided into eight different management areas (M.A.). Each M.A. emphasizes a different set of management goals and offers a spectrum of recreation opportunities. Six of the management areas have shelters including management areas 2.1, 3.1, 5.1, 6.1, 6.2, and 8.1. Management areas 6.3 and 7.1 do not have shelters. Both of these last two are small in acreage; M.A. 6.3 emphasizes semiprimitive recreation with motorized use, and M.A. 7.1 features the downhill ski permit areas.

Shelters may fit the Recreation Opportunity Spectrum for all management areas except 5.1 which is designated wilderness. The more heavily used shelter sites would fit better into Management Areas 2.1, 3.1 and 6.1, which offer roaded-rural to semiprimitive experiences. Management Areas 6.2 and 6.3 tend toward the more primitive end of the spectrum even though they are defined as semiprimitive. Management Area 8.1 includes unique, scientific, and scenic areas. Shelters may or may not be appropriate in 8.1 depending on the resources being protected.

## 2. SHELTERS IN SPECIAL MANAGEMENT AREAS

### a. Wilderness

#### (1) The Wilderness Act and Shelters

As mentioned in Chapter I, under discussion of the Wilderness Act of 1964, there is no mention of the acceptability of shelters inside wilderness in the text of the law. Section 4(c) of the Act does state:

There shall be... no structure or installation within any such area.

Section 4(c) outlines the latitude administrators have if actions are necessary to manage an area as wilderness. Hendee, Lucas, and Stanley point out that administrators must provide evidence that an action [such as building or maintaining an existing shelter] is necessary in order to manage the area as wilderness.

Convenience or cost advantage are not sufficient reason for justification. If use of a structure clearly reduced the impact on the wilderness and there were no other alternatives to letting users camp in the area then a shelter might be justified.

Generally, shelters are considered inappropriate in wilderness, and have been removed in many National Park and Forest Service areas after their classification as wilderness. However, over half the visitors surveyed in three Washington and Oregon areas favored the existing shelters.

The Forest Service Manual provides a clear direction for shelters in wilderness and the Forest Plan follows that direction:

Forest Service Manual -

2323.13 - Improvements and Nonconforming Facilities and Activities. Provide facilities and improvements only for protection of the wilderness resource. Document and justify conditions for providing facilities and improvements in the forest plan. Install facilities as a last resort only after trying education, other indirect management techniques, or reasonable limitations on use.

2323.13b - Shelters. Except for Alaska, provide no new shelters. Shelters that existed at the time of wilderness designation may be maintained if allowed by specific legislation, or until they require extensive maintenance. Remove them at this time.

The Forest Plan follows the Forest Service manual direction on shelters in wilderness.

Management Area 5.1 - Wilderness

Recreation Related to Specific Facilities and Sites

Shelters will not be built. Any shelters or tent platforms that existed at the time of wilderness designation may be retained until major repairs are necessary or continued use downgrades the resource. Then shelters will be removed. Limited use of tent platforms may be considered for resource protection.

When the shelters were removed from the Great Gulf Wilderness in 1975 in order to control severe resource deterioration and overcrowding, the Forest Service received criticism from a number of people and through the media.

The Great Gulf is the most heavily used Wilderness in the National Wilderness Preservation System on a per acre basis. Current managers feel that the removal of the three shelters and rehabilitation of the sites have helped encourage dispersed camping and improved the quality of the experience for visitors.

(2) Historic Shelters in Wilderness

Of the nineteen wildernesses managed by the Forest Service that have Adirondack shelters within their boundaries, the White Mountain National Forest has the oldest shelters. Several people have suggested that some of these shelters have historic value and, therefore, should be included under the National Register of Historic Sites. They also point out that wilderness as defined by the Act can also contain features of historical value (Section 2[c]).



Nine shelters are currently inside the boundaries of the White Mountain wildernesses. Several of the shelters in the Sandwich Range Wilderness have been used for almost 100 years, although the structures have been rebuilt a number of times.

The Forest Service has a mandate to save a representative sample of all types of cultural resources that occur on the National Forest. For any shelter that is considered for removal the following questions must be asked:

- Is the shelter associated with a well known individual or organization?
- Does the site and structure have integrity?
- Is the shelter over 50 years old?
- Is the shelter representative of a type of structure that currently exists or did exist?
- Are there other shelters on the Forest that will be maintained that are representative of the structures in question?
- Is the shelter significant in itself?

Several of the shelters located inside the wildernesses have some interesting history associated with them, such as Heermance and Shehadi in the Sandwich Range Wilderness.

#### b. Appalachian National Scenic Trail

The Appalachian Trail winds its way for about 100 miles across the highest peaks in the White Mountains. A string of nine shelters located on or just adjacent to the trail provide a welcome resting place for the "thru hiker":

The Appalachian Trail's traditional system of open shelters, ... provides for shelter from inclement weather and an opportunity for sociability which many hikers enjoy. The present system consists of 230 shelters along the trail's 2,100 miles...

The Forest Plan includes the Appalachian Trail as a Special Area under Management Area 8.1:

#### Management Area 8.1 - Appalachian National Scenic Trail

##### Recreation Related to Specific Facilities and Sites (Construction/Reconstruction)

Trail shelters are aids to long distance hikers and are not considered as independent destinations. Trail shelters should provide trail users with places to eat and sleep after a day of walking.

New shelters will be located and maintained only at locations where there is a demonstrated need. These will generally be located 100 feet or more from the main trail and will not be accessible by road. New shelters should generally not be located closer than 2 miles to an existing road.

Facilities will be limited to shelters, privies, stiles, spring boxes, registers, trailheads, and other facilities agreed to by the Conference and Clubs.

Limit additional development to facilities compatible with the Appalachian Trail. Manage existing facilities to meet trail hiker needs.

Shelter sites that are not needed or that cause unacceptable environmental damage and management problems will be removed.

Manage existing or proposed trail shelters and facilities as stated in the responsible Appalachian Trail Club's permit and/or local management plan.

#### Water

##### General Direction

Protect all sources of drinking water.

##### Standard and Guidelines

Locate all shelters, toilets, and primitive camps in such a way that they cannot pollute drinking water sources. Educate users on low impact camping methods that protect drinking waters.

#### c. Scenic Areas

The Forest Plan identifies Scenic Areas under Management Area 8.1. The goal within this management area is to:

Recognize the need to provide and protect areas of unique or outstanding scientific, biological, geological, historical, recreational, or scenic significance.

The Scenic Areas that have shelters are Pinkham Notch (Hermit Lake shelters), Lincoln Woods (Ethan Pond shelter), Sawyer Pond (Sawyer Pond shelter), and Mount Chocorua (Penacook shelter).

The Standards and Guidelines related to specific recreation facilities in a scenic area state:

Provide facilities to prevent site deterioration and protect the user from health and safety hazards.

All of the scenic areas receive heavy hiking and overnight use and in all cases but one (Lincoln Woods) overnight use is restricted to developed sites (shelters) only.



## C. Shelter Site Management

### 1. SHELTER SITE DESIGN

Use of the backcountry in general and the shelter sites in particular increased through the 1960's and into the 1970's. Managers of these sites observed the increased numbers that were staying overnight and noted the negative changes that were taking place in the condition of the soil, water, and vegetation. In 1967, the Appalachian Mountain Club began assigning trail crew members to systematic clean-up of their four most heavily used shelters and put registers in the shelters hoping to learn more about the amounts and patterns of use.<sup>8</sup>

Summer season shelter use has increased 18 percent since 1970, before which no reliable figures are available. Lean to shelters with a capacity of eight sometimes attract 60 people a night during periods of peak use, placing a tremendous strain upon the area surrounding the shelter.<sup>9</sup>

In 1970 a Campsite Betterment Plan was agreed to between the AMC and the Forest Service. Liberty Springs shelter was chosen as the site of a pilot project<sup>10</sup> to try and reverse the trend in deteriorating conditions at backcountry sites. Liberty Springs is located near tree line in the Franconia Range and had all the symptoms of serious overuse:

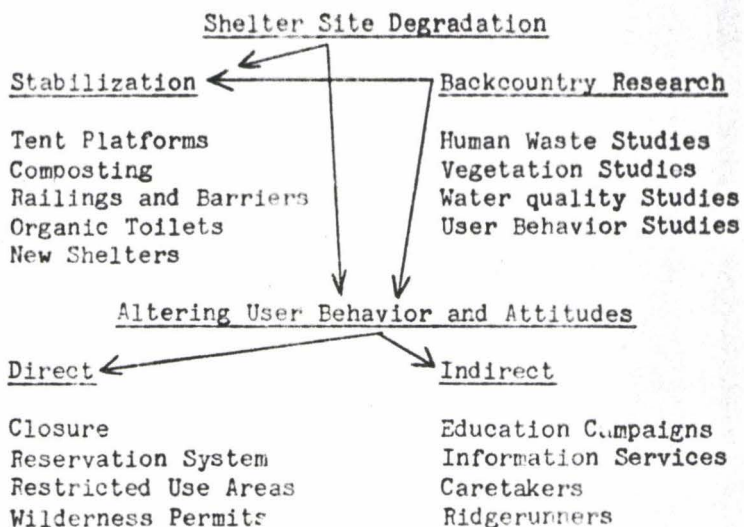
- Trees cut down for firewood up to 200 feet away from the shelter.
- The ground area in front of the shelter was completely barren of any vegetation.
- Campers were instructed to throw their trash into a can pit. Over two tons of trash had accumulated near the site.
- Human waste disposal consisted of an open frame toilet over a shallow pit that filled quickly.

The work done on the Liberty Springs project changed the way backcountry sites are managed by thoughtfully designing the location to handle a prescribed amount of use. The following sections of this chapter will deal with some of the specific techniques that have been developed.

In assessing the various techniques available to the manager of a shelter site Stever (1976) outlined a process:

The areas where campers tend to aggregate will always be plagued by overuse and must either be restricted or modified to expand capacity or capability.

## Control of Shelter Site Degradation



The experience at Liberty Springs was followed by the Garfield Ridge campsite in 1971 which was followed by Guyot, Ethan Pond, and Desolation administered by the AMC; and Franconia Brook, Thirteen Falls, Rocky Branch #1 and Sawyer Pond administered by the Forest Service. Each experiment became more sophisticated as experience gave insight into what was or was not effective. Through the use of caretakers, restricted use areas, carry in-carry out, tent platforms, improved sewage disposal, education, and law enforcement, some definite improvements were taking place at shelter sites.\*

The concept of design capacity was further expanded by Leonard based on three variables that the manager must consider: (a) the experience the user expects, (b) the existing ecological conditions on the site, (c) the cost of maintaining the site and the anticipated availability of funds over time. Tradeoffs could be made in either a, b, or c in order for the manager to design a site to handle a given number of people at a given experience level.

The term "design capacity" represents more than a semantic change. It implies that management is not tied to the capacity of sites as they presently exist, and that a multitude of management tools are available for judicious use. Furthermore, it stresses the fundamental idea that backcountry management must be carefully thought out--designed--well in advance in order to satisfy the needs of recreationists, while at the same time protecting forest resources. <sup>12</sup>

\* Tent platforms are constructed to stand several inches above the ground, providing a flat surface on which one or two mountain tents can be pitched. The use of a platform reduces damage to an area because it confines tents and



campers to a prescribed location. Platforms are inexpensive, durable and easily moved when an area begins to show wear. Tent platforms may be used with a shelter or separately to determine design capacity.

The Campsite Betterment Plan was completed in 1975 resulting in improvements in many backcountry sites. Since that time considerable experience has been gained by both the AMC and the Forest Service in implementing various management techniques. These positive steps, however, have not been continued or expanded in recent years except at a few of the most heavily used AMC and Forest Service sites.

-- In most cases shelter sites have not been maintained at a predetermined quality level. Site plans have not been developed.

-- Some shelters managed by cooperators have fallen into disrepair.

-- There is inadequate funding for shelter maintenance or backcountry patrol.

-- Less heavily used shelters have not received as much management and are suffering from inattention with a corresponding reduction in resource quality.

-- Forest Service backcountry management research has been eliminated in the Northeast, a victim of budget and personnel cuts.

## 2. Soils

In 1971, a Forest Service pollution abatement team consisting of a soil scientist, hydrologist, and engineer visited the majority of the backcountry sites on the Forest, analyzed the local soils, and developed a standardized site evaluation process for toilets and leach fields in dispersed pedestrian recreation areas. Using pollution abatement funds a number of new toilets were placed in more desirable locations. Other toilets were improved in 1975.

Heavy use around most shelters has compacted the shallow soils. The soil in most cases is inherently infertile, especially at the high elevations of some shelters.

-- The capacity of several shelter locations to handle pit toilets is suspect.

-- Shelter sites may need fertilization, trees cut to increase the amount of radiation reaching ground level, and scarification of the soil to promote growth of vegetation.

## 3. Vegetation

Concern over the disappearance of vegetation around shelters in the White Mountains goes back many years. In 1902, the campers using Carter Notch shelter were evidently building numerous campfires:

-- unless the camp be a closed one, a few years will see every tree in sight of the pond cut for firewood, and the already impaired beauty of the place will be hereby well-nigh lost. <sup>13</sup>

The cutting of spruce and fir boughs for bedding has gone out of fashion and the development of efficient, light weight cooking stoves has reduced the demand for wood. Campfires are, however, still popular.

The combination of soil compaction from tramping, tenting around the shelter sites, and cutting of fuelwood has created soil erosion and an eyesore at many sites.

-- Vegetation management plans should be developed and carried out at shelter sites. Thinning of trees to increase solar radiation and the use of wood chips in heavily tramped areas would encourage plant and tree regrowth and improve aesthetics.

-- Information on the negative effects of cutting trees around shelters and the benefits of using portable stoves should be more widely available to backcountry users. Information on how and where to collect firewood properly is also important.

-- Efforts should be made to move shelters off trails and shore lines. By using vegetation to screen the shelter from other activities the quality of the experience will be improved for all users and fragile shoreline resources will be protected.

-- The layout of trails and defining the limits of clearing in front of the shelter should be part of a site plan for each shelter. <sup>14</sup>

#### 4. Water

Water is one of the essential ingredients for a camping experience and therefore for a shelter site. In most cases water is abundant but in a few locations the quantity of water is marginal or non-existent. Water quality is unknown at most sites. In the pollution abatement study done in 1971 the following conclusions were reached:

(1) Widespread contamination or pollution of water courses was not taking place.

(2) Poorly located pit toilets and malfunctioning sewage systems were a health hazard. About 40% of the dispersed sites were sanitarily unsatisfactory. <sup>15</sup>

Since the 1971 study, deficiencies in sewage systems have been corrected through system redesign or removal of the facility. There are, however, a number of toilets which are again suspect and may need relocation or closure. Giardiasis, the "backpackers' disease", is known to occur in the White Mountains but the water quality remains high. Visitors are cautioned to boil or treat surface water.

-- A reliable source of water should be found for each shelter.



-- The water source should be monitored for quality and quantity. The Forest Service should not put the onus on the user to determine if a shelter site water source is polluted.

-- The water source should be protected from pollution.

## 5. WASTE DISPOSAL

### a. Solid Waste

For almost sixty years the Forest Service and other organizations provided can pits at campsites in the backcountry. By 1970 there just wasn't any place to put any more trash. This trailmen's description of the trash disposal problem even in 1941 gives a vivid example:

The garbage pits at the shelters have been a source of grievance. Each pit has a two-hundred pound wooden cover. Drainage principles had to be considered in the choice of site, and many times the shallow soil foiled the best of plans. More over, the pits once located, filled up so rapidly that all available holes were soon full. It became necessary to dig up old pits and bury the none<sup>16</sup> too delectable contents in scattered places through the woods.

The can pits disappeared in 1970 when the Carry In - Carry Out program began. Although there is still a littering problem the program struck a resonant cord with the majority of the public.

At all the hostels and campsites, I had found public-service advertisements from the AMC and the Forest Service. For example, there was the Carry In/Carry Out sign, admonishing the traveler to leave nothing behind him, and even to pick up what others had left. (Modern hikers are remarkably fastidious). They almost never drop anything along the trail, but their good intentions seem to weaken when they reach a campsite: "destination trash" is the new problem in the mountains.

-- Educating the public on the Carry In - Carry Out ethic with reminders at the shelter sites and in other literature and media will continue to be a priority as more people use the backcountry in the future.

### b. Sewage

The period from 1970 to 1980 was the most innovative time in the history of backcountry management in the White Mountains. Managers realized there was a problem with overuse that could get seriously out of hand. Human waste disposal wasn't something that people had given much thought to solving. The backcountry manager faced some unique problems. Soils are usually shallow and disposal

sites limited. At the higher elevations decomposition slows down because of lower temperatures.

A variety of techniques have been used to try and solve the sewage disposal problem including: Identification of suitable soils and locations for disposal on site by a qualified soil scientist; Flying out waste in metal barrels via helicopter; Various methods of composting; Personal disposal of waste in the litter layers of the forest floor.

- Continue to educate the user on proper methods of human waste disposal.
- Use bin composting at elevations below 2500 feet where appropriate.
- Encourage research into better methods of sewage disposal at remote locations.
- All shelter sites should have an approved and clearly identified location, which is sanitary, where visitors can deposit human waste.

#### 6. HIKER SAFETY AND THE SHELTER

Ten shelters are located above 3000 feet in the White Mountains, where weather can be severe. Some observers believe that the shelters offer a safe haven in case of bad weather. Others believe that the shelters are an attraction that extends some hikers beyond their abilities. Over 30% of shelter users are first time campers and 50% to 60% are first time campers in the White Mountains.

Novices tend to camp in or near lean-tos' because of the security that they appear to afford. In the case of the higher lean-tos, novice backpackers often pushed themselves beyond limits of safety because they were led on by the presence of these lean-tos.

- Educational efforts should continue to stress safety in the backcountry. People should be encouraged to carry tents, sleeping bags, stove and map and not depend on the shelters for an overnight stay.

#### 7. CARETAKERS, VOLUNTEERS AND USE FEES

A caretaker is a paid employee of the AMC, Forest Service, or cooperating organization who spends his or her full time repairing or maintaining a shelter site and meeting people who use that facility. In the case of the AMC or other organization such as the Randolph Mountain Club a nominal fee is usually charged for an overnight stay to try and cover the cost of the caretakers' services.

According to the AMC research division, then, each of us was costing the organization thirty-two cents, over and above the dollar we had paid to Carol Varner. I asked Carol how the fee system had been greeted. Very well, she said; most hikers understood the need for a caretaker at campsites like this one,



and were willing to part with a dollar for the privilege of sleeping here. This might seem self-evident to anyone who is not a backcountry hiker. But to most of us the whole idea of hiking is to get away from caretakers, fences, and the exchange of money. I was surprised that she had not experienced some outrage from her customers. Carol did admit that she sometimes waived the one-dollar fee. It appeared that the most likely recipients of her forgiveness were Through Hikers, who seldom carry any more dollars than will pay for groceries and an occasional coin-op laundry.

Much of the success in rehabilitating the heavily used shelter and tent platform sites has to go to the caretaker program. Shelters and campsites where caretakers have been or are being used include Liberty Springs, Garfield Ridge, Guyot, Ethan Pond, Nauman (Mizpah Springs), Grey Knob Cabin, Log Cabin, Crag Camp, The Perch, Sawyer Pond, Franconia Brook, Thirteen Falls, Camp Sixteen, Imp, Hermit Lake, and Kinsman Pond.

The caretaker has to be a jack of all trades in order to deal with the physical aspect of site construction and maintenance, and the social aspect of dealing with people. Not everyone appreciates the caretaker, rather looking on the authority figure as an intrusion on his or her backcountry experience.

Taking the time to understand and relate to this varied stream of personalities is a very important part of caretaking. Each hiker has had to work a little to arrive at this destination. Each one feels some sense of belonging here, having expended that amount of effort as commitment. Caretaking involves being able to tap that commitment, to channel that energy and concern into helping the woods.

-- Caretakers are an essential ingredient on a full time or part time basis in maintaining or rehabilitating a heavily used site.

-- The costs of hiring a caretaker will not be totally covered by the nominal fee collected.

The AMC, the Green Mountain Club and the Adirondack Mountain Club have all used volunteers and Adopt-A-Shelter programs. <sup>20</sup> The volunteer effort can be as large or as small as the individual volunteers' resources. Most volunteers work at cleaning the lean-to area, packing out unburnables, making minor repairs and reporting the need for major work, although many shelters along the Appalachian Trail outside of the White Mountains were built by volunteers.

The Forest Service has a number of shelters under special use or cooperative agreement with organizations which makes the organizations responsible for maintenance and repair.

-- Volunteers can substantially reduce the cost of shelter maintenance.

-- Special Use agreements should be adhered to and the involved organizations be held responsible for maintenance and repair.

-- The Forest Service should assist volunteers and cooperators with both technical and financial help when the shelters need major repairs.

## 8. INFORMATION

The Forest Service and the AMC provide a wide variety of information for backcountry users. Some of this information is directly related to shelters, mostly on location and facilities available, ie. size of shelter, number of tent platforms, fee, camping restrictions, etc.. There is some written information posted at shelter sites such as Carry In - Carry Out.

The number of backcountry patrol people depends on budget and volunteers. In 1976 the Forest Service had twenty-one patrolmen covering most areas of the forest. In 1986 this number was down to four Forest Service employees part time and four or five volunteers.

-- Accurate, timely information is essential if the user is to have a good experience and to learn the proper way to protect the resources.

-- The most heavily used shelter sites should be visited on a regular schedule by a knowledgeable patrol person.

-- Information and education should be the primary responsibilities of patrol people and caretakers.

-- At each shelter clearly written, simple instructions should be posted for the proper care and maintenance of the shelter and site. This information could be posted in every shelter.



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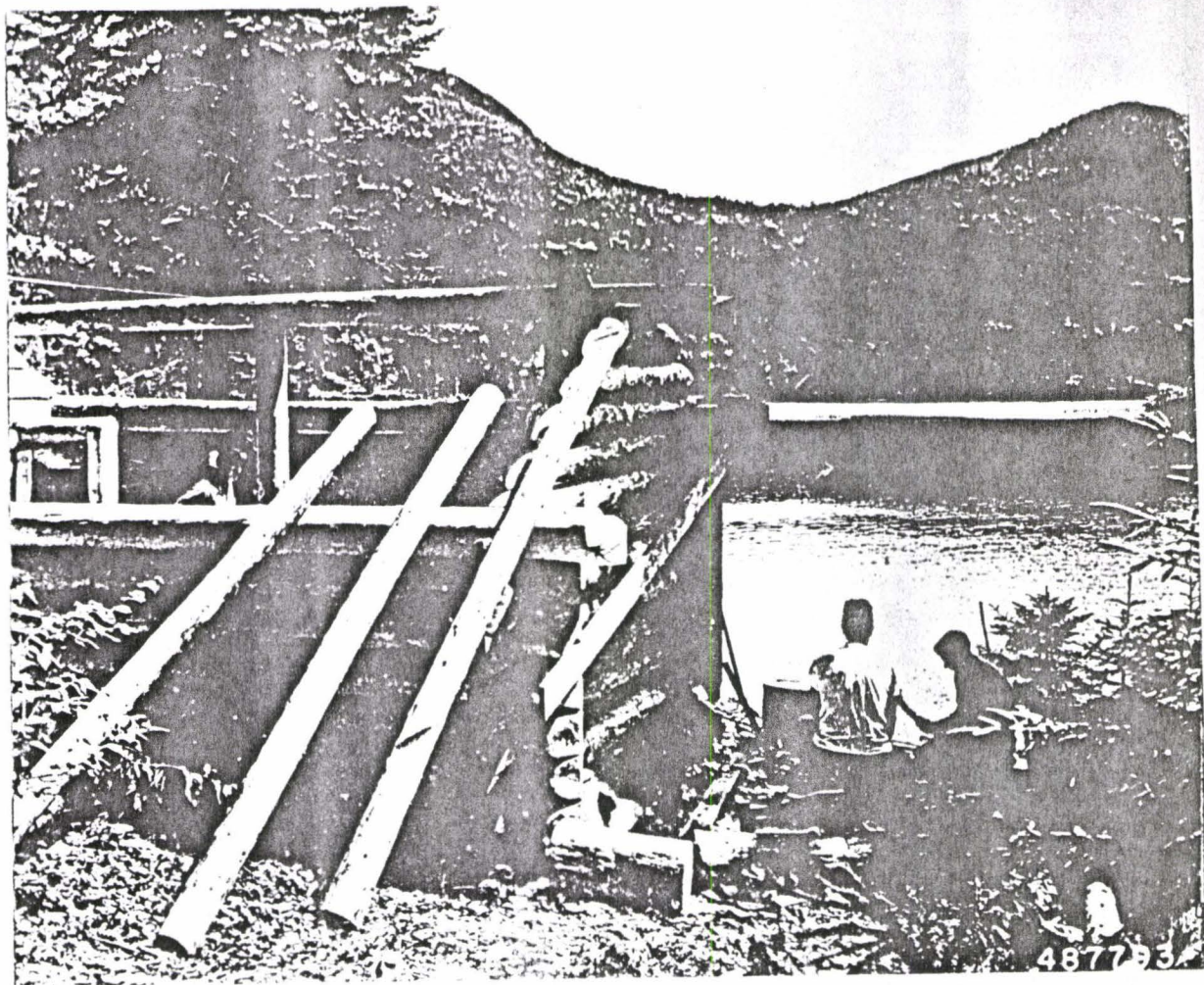
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## CHAPTER V

# Recommendations

## V. RECOMMENDATIONS FOR SHELTER MANAGEMENT

### A. Decision Making Process

A decision on each shelter site was made using the following process:

#### 1. Information on specific shelters was collected.:

a. Shelter visits - This is the best, and most enjoyable, method of collecting the various resource and recreation-related data on the 40 existing shelter sites in the White Mountains. I personally visited 25 shelters, camping overnight in three of them. Four of these 40 sites are in the Mahoosuc Range just outside the National Forest boundary. Those four sites were examined but are not included in the recommendations.

b. A shelter questionnaire was sent out to District Rangers to be answered on each shelter under their jurisdiction. Questionnaires were also sent to those cooperators who maintain 18 of the shelters. See the Appendix for an example of the questionnaire.

c. Discussions were held with each District Ranger concerning assumptions, forest wide recommendations and individual shelter recommendations. Similar discussions were held with the shelter coordinator for the Appalachian Mountain Club.

#### 2. General assumptions.

General assumptions were made that would effect all of the shelters on the National Forest. These assumptions were considered when making judgements on the value of the shelter system to the recreation user, and when making decisions on each individual shelter.

-- Demand for dispersed nonmotorized recreation activities will continue to increase slowly over the next 5 decades according to the Forest Plan completed in 1986. Increased development of second homes and condominiums on the periphery of the Forest may create more demand at an earlier date than expected.

-- The White Mountain National Forest will continue to emphasize nonmotorized dispersed recreation activities and maintain them at a high quality level.

-- Hiking, backpacking, crosscountry skiing, and winter mountaineering will remain popular, resulting in high levels of Forest use during all four seasons.

-- Adirondack shelters have become an accepted and important part of the recreation experience in the White Mountains, especially along the Appalachian Trail. People using the White Mountains will expect shelters to be part of the spectrum of recreation opportunities available to them. Where compelling need is demonstrated for removal of shelters, people have been willing to support such removal.

-- Outdoor equipment will continue to improve, becoming lighter, and providing more comfort and safety for the user. As a result the necessity for shelters is reduced.



-- The majority of users will continue to come from urban areas and a large percentage of people will be novices in the outdoors, many of them coming to the White Mountains for their first backcountry camping experience.

-- Shelters can be used as a management tool to reduce environmental impacts from camping by concentrating use, and increasing design capacity of sites. This can be especially effective in alpine zones and heavily used scenic areas.

-- Each shelter site must be designed to fit into the landscape, protect the quality of the recreation experience, and insure protection of vegetation, soils, and water.

-- Water is desirable in the vicinity of the shelter site. The water source should be protected and managed to insure quantity and quality wherever feasible.

-- Costs of building new shelter sites is high and will increase. Capital investment funds for construction will be scarce and difficult to justify.

-- Cooperators have been important in maintaining the existing shelter system. The individuals and organizations maintaining shelters may need technical and financial assistance to complete major construction projects.

-- Fee collection and caretakers at shelter locations will continue to be an important management option.

### 3. Alternatives

The following three alternatives were considered for the management of each shelter site. In simplified terms the question asked was; should the shelter be kept or destroyed.

A. No Action. Leave the shelter in its present location.

B. Remove the shelter and rehabilitate the site within a specified time period.

C. Build a new shelter at a new location.

### 4. Evaluation Criteria

A. Each of the three alternative was considered using a set of five evaluation criteria as listed below for every shelter location. Is the shelter location suitable to provide the desired recreation experience? Does the shelter fill a public need? Does the shelter and surroundings meet basic requirements for health and safety? Is management of the shelter site economically and administratively feasible? Will management of the shelter site be consistent with existing regulations and management direction?

Each site was studied and based on personal knowledge, cooperators observations and discussions with managers, an appropriate decision was made.

TABLE 1

TABLE 2		SHELTER / RANGER NAME / DISTRICT		SHELTER CONDITION Years Before Major Repair		VEGETATION-SOIL CONDITION Good Moderate Poor		DRINKING WATER SOURCE Pond Stream - Permanent Stream - Intermittent Lake Spring Well		HUMAN WASTE DISPOSAL Pit Composting Vault Flush Other None		ELEVATION		FIREWOOD AVAILABILITY Good Moderate Poor		FIREPL Yes No N/A - No Fires Allowed		CARETAKER Yes No		MAINTAINING ORGANIZATION		FEE \$/NIGHT		SHOULD SHELTER BE KEPT? Yes No Moved Removed		REASON FOR ACTION - Move/Remove Inside Wilderness Boundary Part of Developed Recreation Site Too Close to Road Poor Water Source No Recreation Value Poor Location - Environment		REASON FOR ACTION - Keep Appalachian Trail Remote Site Adjacent to Alpine Area Confines Camping to Managed Site Unique Recreation Opportunity			
Penikese Island																															
Black Mountain				5-10									2500									SLA									
Desolation				10+									2200									AMC									
Elfin Pond				10+									2800									AMC									
Kinsman				10+									3100									AMC									
Eliza Brook				3-5									2500									AMC									
Peaver Brook				1-3									1900									DOC									
Jeffers Brook				10+									1350									DOC									
Three Ponds				3-5									1800									FS									
Quoyt				10+									4000									AMC									
Francis Brook				5-10									1500									FS									
Evans Notch																															
Province Pond				3-5									1327									FS									
Perkins Notch				3-5									2600																		
Caribou				5-10									2600																		
Blue Brook				5-10									1700																		
Baldface				10+									1100																		
Grave Brook				10+									1700									FS									
Wild River				1-3									1200																		
Ammonoosuc																															
Copetone				5-10									2300									FS									
Cartfield Ridge				10+									3700									AMC									
Androscoggin																															
Hermit Lake				3-5									850									AMC									
Perch				10+									300									AMC									
Fallie River				5-10									300									FS									
IMP				10+									3400									AMC									
Loe Cabin				10+									3300									AMC									
Saco																															
Mt. Langdon				3-5									1800									Subs									
Mountain Ford				3-5									1500									FS									
Rocky Branch #1				5-10									1550									FS									
Sawyer Pond				1-3									1800									FS									
Dry River #2				5-10									2850									FS									
Pennock				5-10									2850									FS									
Rocky Branch #2				3-5									2800									FS									
Flat Mt. Pond				3-5									1700									FS									
Camp Heerance				1-3									3700									WDC									
Camp Shephard				1-3									3800									WDC									
Camp Rich				1-3									3400									WDC									
Penobscot				1-3									3000									AMC									



## Pemigewasset Ranger District

### 1. Black Mountain Pond

The preferred alternative is to remove the shelter and rehabilitate the site within 5 to 10 years. Management actions needed for implementation are:

- a. Determine if the shelter is in fact within the boundary of the Sandwich Range Wilderness. The shelter must be at least 66' west of the Black Mountain Pond Trail or it is inside the Wilderness.
- b. If the shelter is not inside the Wilderness then study its relocation/removal as part of the Sandwich Range Wilderness management plan. The shelter is too close to Black Mountain Pond.
- c. Install a pit or a composting toilet on the site during the interim period before removal of the shelter.
- d. Continue the existing special use permit with the Squam Lakes Association until removal.
- e. Before removal this shelter should be photographed, measured, and its historical significance determined.

Black Mountain Pond shelter has been used as a destination by people bringing in off road vehicles and by fishermen. There currently is no toilet. The shelter is too close to Black Mountain Pond and the vegetation around the site has deteriorated. The Squam Lakes Association maintains the site. During the management planning for the Sandwich Range Wilderness a determination must be made if another location for a shelter outside the wilderness would be appropriate. There is no evidence that this shelter has any unique historical significance.

### 2. Desolation

The preferred alternative is to remove the shelter and rehabilitate the site within the next ten years.

- a. This shelter is inside the boundary of the Pemigewasset Wilderness. Before removal the shelter should be photographed, measured, and its historical significance determined.

Desolation is a remote site inside the Pemigewasset Wilderness. It is near several trail junctions and gets moderate use during the summer with many tents being pitched near by. The Appalachian Mountain Club maintains the site. There is no indication that this shelter has any special historical significance. The shelter needs some construction work. During the development of the management plan for this Wilderness, decisions need to be made on removal date and whether or not to place some tent platforms in the area. Tent platforms would, however, only be a temporary solution. Permanent structures are not appropriate. The water source is better at Camp 24, upstream from the current location.

### 3. Ethan Pond

The preferred alternative is "no action" and manage the site with a caretaker/user fee.

- a. Continue to operate under a special use permit with the Appalachian Mountain Club.

Ethan Pond Shelter is located along the Appalachian Trail. It is an attractive overnight stop and was operated as a caretaker site by the Appalachian Mountain Club for a number of years. The shelter and surroundings are currently in good condition but deteriorating without the attentions of a caretaker since 1978.

### 4. Kinsman Pond

The preferred alternative is "no action" and manage the site with a caretaker/user fee.

- a. The vegetation at this site as well as the soil and water resources need rehabilitation. The Appalachian Mountain Club has established a caretaker and use fee at this Appalachian Trail site and begun the necessary resource work.

- b. Continue to operate under a special use permit with the Appalachian Mountain Club.

This is a spectacular site along the Appalachian Trail that has been allowed to deteriorate. The shelter is too close to Kinsman Pond (50 feet) but to move it would be expensive and counterproductive from a resource standpoint. Platforms have been added nearby to handle overuse. Caretaker management should be continued, if only part-time, until the site is stabilized. The shelter is in excellent condition.

### 5. Eliza Brook

The preferred alternative is "no action".

- a. Continue the special use permit with the Appalachian Mountain Club.

This is a remote site along the Appalachian Trail that can use some vegetative management work to improve ground cover and solar radiation to dry out the site. Site gets low to moderate use.

### 6. Beaver Brook

The preferred alternative is to remove the shelter and build a new shelter at a new location.

- a. Determine the historical value of the shelter. Discuss disposal with the Dartmouth Outing Club (D.O.C.)



b. Work with D.O.C. to locate an appropriate shelter location along the Beaver Brook Trail, farther from Rt. 112.

c. Continue the special use permit with the Dartmouth Outing Club on the new shelter.

Beaver Brook is an Appalachian Trail shelter that is close to Route 112 (0.2 mile). The site has been overused and attracts unsuitable users. Sewage disposal and the fuelwood supply are inadequate. Use is not heavy enough to justify a caretaker.

#### 7. Jeffers Brook

The preferred alternative is "no action".

a. Continue the special use permit with the Dartmouth Outing Club.

Jeffers Brook is the newest shelter on the Forest built in 1981. It is on the Appalachian Trail. Although it is close to a public road there hasn't been a problem with parties or vandalism and the site is in good condition.

#### 8. Three Ponds

The preferred alternative is to remove the shelter to a new location.

a. Move the shelter back from the lake so it will fit into the surrounding forest and provide better sites for waste disposal within 3 to 5 years.

This is a remote site on a pond that is attractive to fishermen. The current sewage system is questionable and the shelter needs more regular maintenance.

#### 9. Guyot

The preferred alternative is "no action".

a. Continue the special use permit with the Appalachian Mountain Club and the use of a caretaker.

Guyot is located close to the Appalachian Trail, at tree line, adjacent to the Pemigewasset Wilderness, between several 4,000-foot peaks and near some of the most spectacular scenery in the White Mountains. The hike from Crawford Notch to Franconia Notch or vice versa is popular and in itself a justification for both Guyot and Garfield Ridge shelters. This is a remote site and the shelter may have some "safety value" benefits. Tent platforms are located at this site.

#### 10. Franconia Brook

The preferred alternative is to remove the shelter and rehabilitate the site within three to five years.

Located along a high use trail (Wilderness Trail) which leads into the Pemigewasset Wilderness, the Franconia Brook shelter is only a few hundred feet from the Wilderness boundary. A Restricted Use Area prohibits camping along trail so those planning to camp come to this location. The site has some serious over use problems with bare ground conditions and no firewood. The shelter is not currently used during the summer period with the on-site caretaker controlling use. Campers are required to use tent platforms. Winter use is allowed.

The shelter at this location doesn't serve any useful purpose. Because the trail access is flat, it draws groups interested in carousing. There is no indication that this shelter has any unique historical significance.

#### EVANS NOTCH DISTRICT

##### 11. Province Pond

The preferred alternative is remove the shelter to a new location.

- a. Move the shelter to a higher location in the next 3-5 years.

Province Pond Shelter is an attractive site used by fishermen and other local users. The shelter is too close to the shoreline and is partially flooded because of beaver activity. This is a destination point as the pond is the only attraction.

##### 12. Perkins Notch

The preferred alternative is remove the shelter to a new location.

- a. Move the shelter to a drier, nearby site within 3-5 years.

This is a remote site on the edge of a large marsh with good views. Its present location is wet and the shelter is difficult to maintain because of the water and the type of construction. This is one of the shelters that can be reached by skiing in the winter as the access is over flat terrain.

##### 13. Caribou

The preferred alternative is "no action".

- a. This shelter is within the Caribou/Speckled Mountain Wilderness Study boundary. Any decisions on management of this shelter should wait until legislative action is taken.

This shelter is located near tree line and reduces camping impacts on surrounding fragile terrain. Receives heavy use during summer periods. The shelter is in good condition. A nearby reliable water source may be a problem.



#### 14. Blue Brook

The preferred alternative is "no action".

This shelter receives moderate use by backpackers making trips into the Baldface-Wild River areas. Firewood is a problem.

#### 15. Baldface

Preferred alternative is "no action".

- a. The Baldface Circle Trail runs through the shelter site. The trail needs to be moved to reduce day use pressures on the shelter and improve the camping experience.

This is a popular location adjacent to Baldface Mountain. Water and vegetation are problems at this site. The shelter was recently rebuilt and a composting toilet installed.

#### 16. Spruce Brook

Preferred alternative is "no action" .

- a. The shelter is close to the river but with some rock work and trail design the site can be protected.

This is a popular and attractive site along the Wild River that receives heavy use from families, camp groups and fishermen. A composting toilet has worked well. This shelter also receives winter use from skiers and snowmobilers.

#### 17. Wild River

The preferred alternative is no action.

- a. Some maintenance work needs to be done to rehabilitate the shelter.

The Wild River shelter is part of the Wild River campground and the only Adirondack Shelter that is part of a developed campground on this forest. The Wild River Road and Evans Notch Highway are not plowed during the winter, which leaves the campground seven miles from the parking lot. Snowshoers, skiers, and snowmobilers use the shelter during the winter and the regular campground patrons use it during the summer period. The shelter fits into the campground well from the experience level standpoint. Wild River is a small campground with only eleven camping units, four of which are walk-in sites. Users consider this a more rustic experience because of the campgrounds small size and remoteness from other developments. The road leading to the campground is dirt and a dead end.

Ammonoosuc Ranger District

18. Coppermine

The preferred alternative is remove the shelter and rehabilitate the site within 5 - 10 years.

This shelter is on a dead end trail and receives little or no overnight use. Use is currently for shelter from inclement weather and for picnics for people who come to view Bridal Veil Falls. There is no justification for repairing or rebuilding this shelter. No toilet facilities exist but this has not been a problem because of the lack of overnight use.

19. Garfield Ridge

The preferred alternative is "no action" .

- a. Continue the special use permit with the Appalachian Mountain Club.
- b. Continue the use of a caretaker and use fee as long as necessary to protect the site.

Garfield Ridge is an Appalachian Trail shelter and part of the popular Franconia to Crawford Notch hike. This is a remote site and provides camping in an area where campsites are difficult to find and may be harmful to the trailside resources. Tent platforms have been installed to handle the heavy use the area receives on weekends. This shelter will continue to receive heavy use because of its location at 3900' with spectacular scenery and numerous trails nearby. The caretaker system has maintained the site in excellent condition. This shelter may also have safety benefits.

Other Shelter Recommendations:

Alpine Zone - Presidential Range Campsite

The areas above and adjacent to tree line in the Presidential Mountain Range receive heavy hiking and camping use. Camping and fires are not allowed above treeline but illegal camping does take place to the detriment of the fragile tundra vegetation. Several managed campsites are available in the Northern Presidentials (the Perch and Madison Springs) and at Hermit Lake. There are no facilities south of Lake of the Clouds Hut except at Mizpah Springs. A well thought out design and location that meets thru hiker needs should be studied. The safety of backpackers and the protection of the alpine zone will probably necessitate some type of facility in the future.



## Androscoggin District

### 20. Hermit Lake

The preferred alternative is a qualified "no action" (1).

- a. One shelter (No. 4) of the existing eight shelters is in a trailside location that attracts use and creates problems. Various management techniques should be tried before removing the shelter. The capacity of the site should not be altered from 86 overnight users and three tent platforms.
- b. Improve the sewage disposal system.
- c. Continue the special use system with the Appalachian Mountain Club.

The Hermit Lake shelters are located in Tuckerman Ravine at the headwaters of the Cutler River Drainage.

No camping is allowed in the Cutler River Drainage except at designated sites. Hermit Lake and the Harvard Cabin in Huntington Ravine are the two sites where campers can stay. No fires are allowed. Portable stoves can be used.

These two camping locations determine the overnight capacity of the area.

The location of these sites allows easy access to the alpine zone thus filling a public demand and also protecting the alpine area from overuse. No camping is allowed above treeline.

The shelters are at capacity during much of the year. The heaviest demand being during the Tuckerman Ravine ski season (April - May). The shelters also provide easy access to Huntington Ravine hiking and ice climbing.

### 21. The Perch

The preferred alternative is "no action".

- a. Continue special use permit and caretaker system with the Randolph Mountain Club.

The shelter provides a low impact camping site for the adjacent Presidential Range Alpine area and the upper slopes of the Northern Presidentials where camping locations are difficult to find. The Randolph Mountain Club caretaker works year long.

### 22. Rattle River

The preferred alternative is "no action".

An Appalachian Trail Shelter. Used by local groups for overnights, such as Boy Scouts, because of its easy access from Route 2. Even though the access to this shelter is easy, carousing has not been a problem.

### 23. Imp

The preferred alternative is "no action".

- a. Continue the special use permit with the Appalachian Mountain Club.

An Appalachian Trail Shelter. The Imp reduces impact on Carter Moriah camping locations which are difficult to find. This shelter was recently moved to its present location.

### 24. Log Cabin

The preferred alternative is "no action".

- a. Continue the special use permit and caretaker/use fee management with the Randolph Mountain Club.

The Log Cabin is a shelter rebuilt in 1985 which provides camping in a heavy use area where campsites are hard to find. The Randolph Mountain Club caretaker oversees this facility as well as the Perch on a four season basis.

### Other Shelter Recommendations:

During the time that site design and water studies are going on the following locations should be visited to determine an appropriate facility, if any, for the site.

#### Mt. Cabot Cabin -

This cabin, located on the summit of Mount Cabot in the Kilkenny Range, is a former fire tower lookout facility. A local Boy Scout troop from Lancaster, N.H. maintains the cabin. Local groups have overseen the cabin for many years and want to see a facility maintained. The cabin is reaching a point where some major repair work will be necessary. Discussions should be held with the maintainers to see if a shelter would be an adequate replacement.

Water is not available at this location. A reliable source should be found farther down the mountain.

#### Mount Hight (Zeta Pass) -

Zeta Pass has been a popular tent site for many years. The rugged terrain between Carter Notch and Imp Shelter provides few decent places for the backpacker to stay overnight. Heavy use at Zeta Pass resulted in a Restricted Use Area designation which eliminated the camping opportunity. A shelter or tent platform at this location may, in the long run, reduce the damage from indiscriminate camping in less acceptable locations. Water is a problem at this location.



## Kilkenny Ridge Trail -

The Kilkenny Ridge Trail will greatly expand the hiking opportunities in that little used area. There are good opportunities for campsites (shelters and/or tent platforms) at Unknown Pond and Rogers Ledge. Unknown Pond is a fragile site and already receives some camping use. Considerable thought should be given to any facility to insure that unwanted use will not be encouraged.

### Saco Ranger District

#### 25. Mt. Langdon

The preferred alternatives are to move the shelter and rehabilitate the site within 3 to 5 years.

- a. Continue the special use permit with the SubSig Outing Club.
- b. Determine the shelters location relative to the Wilderness boundary. Relocate the shelter across the Mount Langdon Trail, outside the Wilderness boundary if necessary.

The Langdon Shelter is probably within the Presidential Range-Dry River Wilderness. It is a remote site, receiving light use.

#### 26. Mountain Pond

The preferred alternative is "no action".

This is an attractive site on a large pond within an easy hike from the road. The shelter is used by families, fishermen, and some carousers although it is not a serious problem.

#### 27. Rocky Branch #1

The preferred alternative is "no action".

This shelter is just outside the boundary of the Presidential Range-Dry River Wilderness. It is a short hike for families and fishermen and may keep some camping out of the Wilderness.

#### 28. Sawyer Pond

The preferred alternative is manage the shelter site with a caretaker/user fee.

- a. The Sawyer Pond site receives heavy use and is suffering some resource damage. Institute a summer caretaker as long as necessary to improve site and control carousing. Discuss a special use permit with the Appalachian Mountain Club.
- b. Close the road access at Carrigain trailhead during the heavy use season of the summer.

This is an attractive destination area within a short hike from the road. By increasing the length of the hike into Sawyer Pond we would reduce the number of people that go to the site just to party during the summer. A new trail off the road would make the trip more rewarding for hikers. Increasing the length of the hike into the site may upset some of the fishermen who go there regularly. In addition to the shelter there are five tent platforms which determine the design capacity.

#### 29. Dry River #3

The preferred alternative is to remove the shelter and rehabilitate the site within 5 to 10 years.

- a. Determine the historical significance of this shelter.

The Dry River shelter is within the Presidential Range-Dry River Wilderness. It is a remote site. Dry River shelters #1 and #2 have already been removed. There is no indication that this shelter is historically significant.

#### 30. Penacook

The preferred alternative is "no action".

Penacook is within the heavily-used Mount Chocorua Scenic Area. No camping is allowed in the area except in the shelter or on the platforms, or at Jim Liberty Cabin.

#### 31. Rocky Ranch #2

The preferred alternative is to remove the shelter and rehabilitate the site within 3 to 5 years.

- a. Determine the historical significance of this shelter.

Rocky Branch shelter is inside the Presidential Range-Dry River Wilderness.

#### 32. Flat Mountain Pond

The preferred alternative is "no action".

Flat Mountain Pond Shelter is an attractive site used by fishermen and backpackers. A remote site. It receives light to moderate use. This shelter is just outside the boundary of the Sandwich Range Wilderness.

#### 33. Camp Heermance

#### 34. Camp Shehadi



### 35. Camp Rich

The preferred alternative for the three shelters listed above is to remove the shelters and rehabilitate the site within the next 1 to 3 years.

- a. Determine the historical significance of these shelters.
- b. Terminate the special use permit with the Wonalancet Outdoor Club.

All three shelters are within the boundaries of the Sandwich Range Wilderness.

All three shelters are structurally in poor shape not having been maintained for a number of years. Shehadi is unsafe. Use of these sites is low because of their unattractive condition. Water quality and quantity are problems at both Shehadi and Rich.

Camp Shehadi and Camp Heermance are lacking any waste disposal facilities. Water is not easily available at Heermance. The vegetation and soils around Shehadi and Heermance shelters are in poor condition.

All of these shelters are over fifty years old.

### 36. Resolution

The preferred alternative is to remove the shelter and rehabilitate the site in 1 to 3 years.

- a. Terminate the special use permit with the Appalachian Mountain Club for this shelter.
- b. Determine the historical significance of this shelter.

Resolution Shelter is inside the boundary of the Presidential Range-Dry River Wilderness.

### F. General Recommendations for All Shelter Sites

The following recommendations would apply to all new or existing shelter sites on the White Mountain National Forest.

1. Each shelter location should be examined and a site management plan developed. This would include analysis of travel ways and vegetation (overhead and ground cover) with a design and prescription written to solve the problems inherent to the site.
2. Each shelter should be examined to insure proper functioning of the existing sewage disposal system and a prescription written for correcting any nonfunctioning or marginal systems.
3. A water quality and quantity determination should be made for each shelter site. Where a safer water source can be developed or the existing source improved, a prescription should be written to identify necessary actions. This should be coordinated with the plan for site design (See No. 1).

4. Each shelter site should be examined once a year by a responsible member of the District staff and the site plan updated if necessary. If applicable the responsible cooperator should be involved.

5. Shelter sites without caretakers should be visited on a regular schedule by a combination of backcountry patrol, cooperators or District staff for clean up of the site and visits with people using the shelter.

6. Individual information/education/interpretive displays that are inexpensive and simple to read should be designed and installed in each shelter. Information should emphasize protection of the site and shelter ethics.

7. A long term monitoring program should be developed with cooperators (AMC research and/or colleges) to photographically record soil and vegetation changes at shelter sites, determine use, and to report user satisfaction with the shelter experience.

8. Unless there are good reasons for removal the existing shelters should be kept. The shelter camping experience is a unique recreation opportunity.

9. Part-time or full-time caretakers should be used at the most popular shelter locations during the summer and fall seasons.

10. Volunteer adoption of shelters should be encouraged along with the adopt-a-trail program.

REFERENCES  
Chapter V

1. USDA Forest Service, Land and Resource Management Plan, White Mountain National Forest, 1986.
2. USDA Forest Service, Dispersed Pedestrian Recreation Addendum to Forest Plan, White Mountain National Forest, 1975.



## APPENDIX

## APPENDIX

### Consultation with Others

#### Written Responses

A letter asking for information on shelters was sent to a number of sources. Responses were received from the following individuals:

1. Willie Janeway, Adirondack Mountain Club Trails Coordinator, Lake Placid, N.Y.
2. Laura and Guy Waterman, East Corinth, VT.
3. Steven Hayes, Sub Sig Outing Club, Stoneham, MA.
4. George Zink, Wonalancet Outing Club, Wonalancet, N.H.
5. Robert Lucas, Wilderness Management Research, U.S.F.S., Missoula, MT.
6. Forest House, New England Trail Conference, East Long Meadow, MA.
7. Robert Proudman, Trail Coordinator, Appalachian Trail Conference, Harper's Ferry, WV.
8. David Richie, Appalachian Trail Project Office, National Park Service, Washington, D.C.
9. Buzz Caverly, Baxter State Park, Millinocket, ME.
10. Earl Jette, Dartmouth Outing Club, Hanover, N.H.
11. Bob Pramuk, Green Mountain National Forest, Rutland, VT.

#### Personal Contacts

Meetings were held with several people to discuss specific aspects of shelter history and management. The following individuals were especially helpful:

1. Laura and Guy Waterman, East Corinth, Vermont.
2. George Zink, Wonalancet Outdoor Club, Wonalancet, N.H.
3. Rueben Rajala, Appalachian Mountain Club, Trails Supervisor, Pinkham Notch, N.H.

4. Cary Carr and Gary Davis, Androscoggin Ranger District.
5. Dave Pratt, Saco Ranger District.
6. Steve Chandler and Bob Slagle, Pemigewasset Ranger District.
7. Paul Shaw and Art Gigliello, Ammonoosuc Ranger District.
8. Chad Converse and Rick Mevey, Evans Notch Ranger District.
9. Earl Kiewald, Recreation Staff Officer.
10. Burnham Martin, Appalachian Mountain Club, Pinkham Notch, N.H.
11. Don Feeney, Backcountry Patrol, Evans Notch Ranger District.

#### Questionnaires

Shelter questionnaires were received back from the following organizations on the shelters they maintain:

1. Appalachian Mountain Club.
2. Randolph Mountain Club.
3. Sub Sig Outing Club.
4. Dartmouth Outing Club.
5. Androscoggin Ranger District.
6. Ammonoosuc Ranger District.
7. Evans Notch Ranger District.
8. Saco Ranger District.
9. Pemigewasset Ranger District.



ADIRONDACK SHELTER QUESTIONNAIRE

RANGER DISTRICT \_\_\_\_\_

SHELTER NAME \_\_\_\_\_

1. Where is the Adirondack shelter located?

A. What trail - \_\_\_\_\_

B. How far from the nearest road in miles and 10ths \_\_\_\_\_

2. What is the physical condition of the shelter? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Without further repair, other than minor maintenance, how long a time would you estimate before the shelter becomes unsafe, or needs repair to make it usable? (i.e., needs roof, floor or side boards replaced.)

1 - 3 years \_\_\_\_\_

3 - 5 years \_\_\_\_\_

5 - 10 years \_\_\_\_\_

10 + years \_\_\_\_\_

3. What is the condition of the vegetation and ground cover surrounding the shelter?

A. Little evidence of vegetation deterioration - grass growing around shelter, shrubs in understory, little evidence of trees chopped for firewood, only minor scars on birch bark.

Remarks: \_\_\_\_\_

B. Moderate vegetation deterioration - Some large spots of bareground around shelter. Some trees have been chopped for firewood and lower branches of trees broken off, birch in the area are scarred or stripped of bark.

Several spots for tent camping may have been cleared out in surrounding woods.

Remarks: \_\_\_\_\_

\_\_\_\_\_

- C. Heavy vegetation deterioration - Little ground vegetation left around shelter. Rain would turn area to mud. Numerous trees have been chopped for firewood. Forest has been killed back from shelter for the most part. Lower branches of most trees broken or chopped off. Large areas of ground cover gone due to tent camping in surrounding area.

Remarks: \_\_\_\_\_  
\_\_\_\_\_

4. Is there water close by?

Is it safe for drinking (Yes  
or No or Don't know)

Lake	_____	_____
Permanent stream	_____	_____
Intermittent stream	_____	_____
Spring	_____	_____
None	_____	_____

Distance to water is within (circle) 200 feet - 1/4 mile - 1/2 mile

5. Are there any attractions that draw campers to this site?

Attracts AT hikers	_____
Exposure to water (waterfalls, streamside, pond, or lake)	_____
Scenic long distance views	_____
Unique formations, ledges, etc.	_____
Forest openings, meadows, bogs, swamps, etc.	_____
Special attraction	_____
	_____
	_____

6. What type of waste disposal system is available for this shelter?

Pit toilet \_\_\_\_\_

Composting \_\_\_\_\_

Other \_\_\_\_\_

Is waste disposal adequate for this site? \_\_\_\_\_

7. Is there a fireplace associated with the shelter Yes \_\_\_ No \_\_\_

Is firewood a problem in the area? \_\_\_\_\_

8. Do we place any special restrictions on the use of this shelter (i.e., Is it in a Restricted Use Area, etc.?)

9. If a cooperator maintains the shelter who is it? \_\_\_\_\_

How well is the shelter maintained? \_\_\_\_\_

10. Is there a charge for the site? Yes \_\_\_ No \_\_\_

If yes, what is the charge? \_\_\_\_\_



11. Is a caretaker at the site?      Yes \_\_\_\_      No \_\_\_\_

    If yes, during what time periods? \_\_\_\_\_

\_\_\_\_\_

12. In your estimation, what is the value of this shelter to recreation management on the District?

A. Does it have a positive effect \_\_\_\_\_

\_\_\_\_\_

B. Does it have a negative effect \_\_\_\_\_

\_\_\_\_\_

- C. If you feel the shelter in question has a negative effect how would you change the situation

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- D. Should this shelter be moved? If yes, where would you move it?

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13. What is the history of the shelter site? (What changes have been made in location, structure, waste management, water system, and user management since the shelter was constructed?)

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Are there any other locations on your District where you would like to see  
a shelter constructed and why?

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